



Patient Care Guidelines for Basic Life Support



Public Health
Seattle & King County

EMERGENCY MEDICAL SERVICES DIVISION



City of Seattle



King County

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NOTES

PATIENT CARE GUIDELINES

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PATIENT CARE GUIDELINES

Introduction to Patient Care Guidelines

Purpose Of Patient Care Guidelines

The purpose of these patient care guidelines is to provide medical control and direction to the providers of Basic Life Support (BLS) services, Emergency Medical Technicians (EMTs) and First Responders (FRs) in King County, Washington. These guidelines, written for prehospital patient care, define the expected level and scope of care provided by BLS personnel in King County.

These guidelines are consistent with information in the basic U.S. Department of Transportation Emergency Medical Technician-Basic course and the King County Competency Based Training (CBT) of 2000, 2001, and 2002.

Important questions addressed in the development include: What is the limit in the scope of EMT practice, given the training and experience level of King County EMTs? What skills can be performed with competence and confidence? And in which cases do patients need additional care by paramedics or consultation with online medical control?

During the past three years, there have been changes in the CBT curriculum including new approaches to transport and destination decisions, EMT administration of epinephrine in patients with anaphylaxis, and broadening the scope of BLS activities. Each treatment plan will describe BLS actions designed to stabilize or improve the patient's condition. EMTs in King County are expected to have studied the AAOS Emergency Care and Transportation of the Sick and Injured, Seventh or Eighth Edition, and be current in Competency Based Training in order to apply these guidelines.

Use Of The Patient Care Guidelines

These guidelines should serve as an outline for patient care. It is not a reference for basic information. It does not serve as a substitute for judgment, or for consultation with paramedics or online medical control. It should provide a guideline to use in deciding **what to do to help the patient**.

These guidelines are in effect as of November 1, 2002.

APPROACH TO PATIENTS

Approach To Patients

PRE-ARRIVAL INFORMATION

Dispatchers often receive a version of the patient's complaint that the EMT may not hear. Remember to consider the dispatch information. In addition, the dispatcher may have given instruction in Cardiopulmonary Resuscitation (CPR), defibrillator use or other interventions.

En route, the BLS crew has an opportunity to consider any other information provided by dispatchers. This is the beginning of scene sizeup, which will continue upon arrival and as new information becomes available on site. EMTs are encouraged to allow the dispatchers to triage and send the appropriate level of resources. Should the response be upgraded, adequate documentation should be provided in the MIR. ALS resources can be added to the call, if needed, after EMT arrival and patient assessment.

SYSTEMATIC EVALUATION

Systematic evaluation and treatment of the patient with use of the SOAP format for reporting is the technique taught in King County. The systematic evaluation includes issues concerned with scene sizeup, body substance isolation, scene safety, mechanism of the injury or general nature of the illness, adequacy of resources dispatched, initial assessment, focused history, focused physical examination, and assessment. The findings of these activities are reported in the SOAP format on the Medical Incident Report (MIR).

SCENE SAFETY

EMS personnel need to protect themselves at all times. Individual responsibility includes familiarization with department and agency operating policies. Each BLS agency is required to have a written policy for management of accidental exposure, e.g. needle sticks, to high-risk bodily substances. Special consideration must be given to unsafe scenes, such as those involving weapons, hazardous materials, noxious chemicals or biological materials, terrorist acts, etc. Individual fire departments have specific operating policies dealing with many of these circumstances and before EMS personnel initiate patient care, local HAZMAT procedures should be followed.

Body Substance Isolation (BSI)

- BSI prevents direct contact with all body fluids, including blood, secretions, excretions, non-intact skin (e.g. rashes and avulsions), and mucus membranes. BSI techniques include hand washing, glove use, face and eye protectors, masks, and gowns.
- Hands are washed after exposure **even if gloves are worn**. Hands are washed immediately after glove removal and after patient contacts. Plain soap, anti-microbial soap, or commercial hand wipes may be used.
- Clean, non-sterile gloves are worn during all patient contacts. Hand washing and fresh gloves must be used between patients.
- Face and eye protection should be worn. When there is risk of exposure, disposable masks with an eye shield or disposable masks with permanent eye protection should be available to protect from splashes and aerosols of body fluids.
- Protective gowns for skin and clothing should be used if splashes and sprays are anticipated.
- Soiled protective equipment should be disposed of appropriately.

SCENE SIZE UP

Scene size up should begin before arrival based on the dispatch report, after arrival at the scene and as circumstances change. Safety is of prime concern --- for the responding EMTs, the sick or injured patient(s), citizens helping and bystanders at the scene. The EMT needs to remain aware of surroundings at all times. A safe scene can change into an unsafe scene. Other changes may require the dispatch of additional resources.

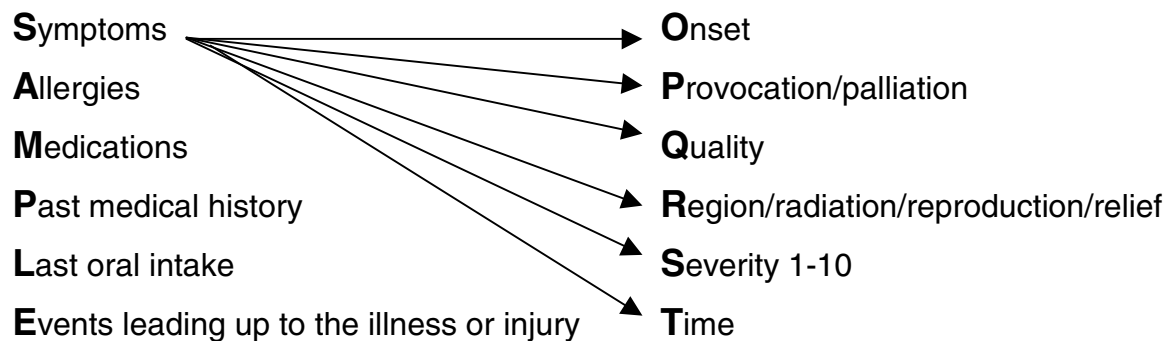
Sizing up should include questions of:

- Number of patients
- Nature of the trauma and/or illness
- Likely treatments
- Personnel needed
- Equipment needed
- Need for law enforcement
- Evolution of the scene from safe to unsafe

SOAP In Evaluation And Reporting

KEYS TO SUBJECTIVE INFORMATION

The subjective (S) part of the report begins with the patient's **chief complaint**, which is then developed with the use of the SAMPLE and OPQRST acronyms as appropriate.



KEYS TO OBJECTIVE INFORMATION

The objective (O) information in SOAP includes those observations, or measurements, that the EMT makes. The earliest ones are a quick assessment of mental function, adequacy of breathing, and adequacy of circulation. Additional focused examination of the patient may provide the data to be recorded. These need to include observations of the patient's general status, vital signs, and specifics relative to the chief complaint. Particular techniques for obtaining objective information include: measurement of postural blood pressures, auscultation of lung sounds, application of noxious stimuli, application of the Cincinnati stroke scale, and Glasgow coma scale.

SOAP IN EVALUATION AND REPORTING – Objective Information/Posturals

Postural Blood Pressures

“Posturals” measure heart rate and blood pressure changes which occur when the patient changes from lying to sitting to standing. In a healthy person blood pressure does not fall dramatically with postural changes. A person who has reduced blood volume due to blood loss or vomiting may not be able to maintain a normal blood pressure with postural change. They may even feel faint or lose consciousness.

Indications for measurement of posturals:

- Patients with suspected GI bleeding or internal hemorrhage
- Patients with generalized weakness
- Patients with complaint of dizziness, lightheadedness or fainting.
- Patients with prolonged vomiting or diarrhea

Contraindications for posturals:

- Hypotension while supine (blood pressure less than 90)
- Third trimester bleeding
- Trauma patients

Procedure for posturals:

- Obtain blood pressure and heart rate after 2 minutes in supine position.
- Position patient in sitting position for 1 minute, repeat measurement of blood pressure and heart rate.
- If test not yet positive, stand patient for 1 minute and repeat measurements.
- If fainting or light headedness develops, return patient to supine position.

Positive findings:

- Decrease in systolic blood pressure of 30 mm/Hg or more from supine to sitting or standing
- Systolic blood pressure of less than 90 mm/Hg in sitting or standing position
- Fainting while sitting or standing

Positive posturals is an ALS indicator.

Auscultation Of Lung Sounds

Auscultation Technique

- Press the diaphragm of the stethoscope firmly against the skin of the patient's chest wall, between the ribs, avoiding bone if possible.
- Avoid placement over clothing (bone and clothing impede sound transmission).
- Ideally listen at the back and front in several locations.
- Compare bilaterally (side to side).
- Move from the bottom to top.
- Have patient breathe out of their mouth, slightly deeper than normal unless patient is short of breath.
- Listen to one or two inspiration/expiration cycles for each location.
- Note if sounds are normal, abnormal, or absent.

SOAP IN EVALUATION AND REPORTING – Objective Information/Noxious Stimuli

Application Of Noxious Stimuli

Painful or “noxious” stimulation of patients is used to elicit a neurological response from patients suspected of central nervous system abnormality.

Indications:

- Patients with suspected traumatic brain injury that requires the Glasgow coma scale measurement.
- Patients with significant drug and/or alcohol overdoses
- Patients with suspected stroke

Approved and accepted methods to deliver noxious stimuli:

- Firm earlobe pressure
- Firm cutaneous pinching
- Pressure over the fingernail

Apply firm pressure to the earlobe for up to five seconds in order to assess a response to painful stimulation. This stimulation may be applied once or twice for no longer than 15 seconds during the initial evaluation and infrequently thereafter, if monitoring of the level of consciousness is necessary.

Prolonged application of stimuli, repeated applications, chemical stimuli, sternal rubs or eyeball pressure are not indicated and not allowed.

Localized stimulation of limbs may be applied with the same guidelines.

Application Of The Cincinnati Stroke Scale

The Cincinnati Prehospital Stroke Scale is used in the field to detect stroke. An abnormal finding strongly indicates a stroke:

Facial Droop	(The patient shows teeth or smiles) <ul style="list-style-type: none">▪ Normal: Both sides of the face move equally.▪ Abnormal: One side of the face does not move as well as the other.
Arm Drift	(The patient closes his/her eyes and extends both arms straight out for 10 seconds) <ul style="list-style-type: none">▪ Normal: Both arms move the same, or both arms do not move at all.▪ Abnormal: One arm either does not move, or one arm drifts down compared to the other.
Speech	(The patient repeats "The sky is blue in Seattle") <ul style="list-style-type: none">▪ Normal: The patient says correct words with no slurring of words▪ Abnormal: The patient slurs words, says the wrong words, or is unable to speak

SOAP IN EVALUATION AND REPORTING – Objective Info/Glasgow Coma Scale

Glasgow Coma Scale

The **Glasgow Coma Scale** is a means of measuring and monitoring a patient's level of consciousness by calculating a score based on the best eye, verbal, and motor response. The lowest score possible is 3, the highest is 15.

Eye Response		Best Verbal Response		Best Motor Response	
Spontaneously open	4	Oriented and talking	5	Obeys commands	6
Opens to voice	3	Disoriented and confused	4	Locates pain	5
Opens to pain	2	Inappropriate words	3	Withdraws from pain	4
No response	1	Incomprehensible	2	Flexes to pain	3
		No response	1	Extends to pain	2
				No response	1

Gag Reflex

The gag reflex is a protective mechanism for the airway. The epiglottis closes the entrance to the trachea, shielding it from food, vomit, secretions or other foreign material. People who are unconscious or have focal brain injury often lose their gag reflex and are at risk of aspiration of foreign material into the trachea.

Indications to check the gag reflex:

- Any patient with altered level of consciousness and the possibility to aspirate
- Diabetic patient with suspected hypoglycemia and the need for oral glucose

Contraindications to check gag reflex:

- Trauma patients with head injury
- Patients with headache, elevated blood pressure and possible intracranial hemorrhage

Procedure:

- Insert a clean tongue depressor gently into the mouth until the back of the throat is touched. A person with an intact gag reflex will gag with this gentle stimulus. Also observe for swallowing movements.
- Be prepared to suction the airway if vomiting is induced.
- Absence or depression of the gag reflex is an ALS Indicator.
- If gag absent give nothing by mouth.
- If gag absent monitor airway patency carefully.
- If gag absent consider placing the patient in the recovery position.

ECG Monitoring

The indications for ECG monitoring are: chest pain, arrhythmia, congestive heart failure, syncope or hypotension.

For BLS providers to use patient monitoring the following criteria must be met:

1. Specific EMT instruction in monitoring techniques and rhythm recognition.
2. Specific defibrillation/monitoring equipment, which will provide hard copy ECG rhythm strips for use by paramedics and others.
3. Medical Program Director approval for addition of monitoring to EMT care plans.

SOAP IN EVALUATION AND REPORTING – Objective Information/Temperature

Temperature Measurement

- Many patients seen by BLS providers have abnormal body temperatures as part of their condition. Measurement of these abnormal temperatures can be an important key to the objective physical exam. Temperature may be measured in a number of ways including an ear thermometer or an oral digital thermometer.
- **EAR Thermometers**
The ear thermometer detects infrared heat from the eardrum and surrounding tissues. It may be used in all ages. Readings are not altered by smoking, eating and drinking.
- **ORAL Digital Thermometers**
Oral thermometers with a temperature sensor on the end and a large digital display are suitable for use in adults. These devices are reusable with a disposable sanitary cover. They respond within 60 seconds with an accuracy of 0.1°F.

KEYS TO ASSESSMENT (A)

The assessment summarizes the finding of the subjective and objective examinations. It is the basis of the treatment plan.

Assessment (A) contains the following elements:

- A summary of the EMT's impression about the patient's condition. This statement is based upon the subjective and objective findings. It may be a restatement of the chief complaint, e.g. sore left leg or a medical diagnosis, e.g. Rule out myocardial infarction. The impression should be focused enough so that paramedics, emergency rooms and others understand the patient's treatment needs.
- The severity of the condition, e.g. mild, moderate, severe. Any special, or co-morbid conditions that might change or modify the treatment plan, e.g. warfarin treatment, diabetes, etc.
- Identification of ALS and BLS criteria. **When ALS criteria are present it is required that paramedics are contacted and evaluate the patient.** If units have not been dispatched then they should be called from the field. Patients who might require intubation, intravenous access or medications will be those with ALS criteria. In addition patients who require additional judgment in their care or who may become severely unstable during transport should be considered for paramedic assessment.

KEYS TO PLAN (P)

Uniform BLS Interventions – BLS Care

Uniform interventions are to be found in each plan. These include immediate basic life support interventions, plus guidelines for transportation and destination decisions.

- **Request paramedics if ALS indicators present.**
- Extrication.
- BLS treatment as indicated.
- Assist with administration of patient's medication as indicated.
- Oxygen when indicated and at the flow rates indicated (See Treatment Skills).
- Positioning for comfort or as needed for condition (See Treatment Skills).
- Comfort measures, for relief of anxiety and discomfort.

SOAP IN EVALUATION AND REPORTING – Plan/BLS Care

- Prepare patient for transport.
- Monitor vital signs and status of illness during evaluation and transport as appropriate for specific condition.

Transport and Destination Decisions

A BLS care plan must contain options for destination (Where should the patient go next for further evaluation and care?) and mode of transport (How is he going to get there?). It is important that the patient be transported in a manner **appropriate** for his condition and that the patient has further evaluation and treatment in a facility **appropriate** for his condition. The EMT should arrange for **safe rapid transport**.

EMT transport and destination decisions are based upon a number of factors:

- The patient's condition and status including the presence of ALS indicators
- Additional factors such as age, co-morbidities, and social conditions that may impact the patient's condition
- The patient's mental status and ability to make decisions
- The patient's family and friends who may or may not be able to assist in transport and care
- The capability and availability of transport vehicles and agencies
- The capability and availability of local non-emergency room medical facilities
- The location and availability of the patient's usual physician
- The patient and family preference
- Transport time to treatment facility
- Out-of-service time
- Magnitude of incident, such as MCI

Occasionally circumstances will indicate the need for rapid BLS transport to an ER without paramedic intervention, because this is the quickest alternative.

The suggested modes of transportation take into consideration some of these factors. Paramedic evaluation and transport has been recommended when the patient is likely to need the skills that paramedics bring to the patient, such as: medical judgement, endotracheal intubation, intravenous access and medications. Paramedics' attendance has been required in some conditions such as anaphylaxis, cardiac arrest, and chest pain of apparent cardiac origin.

Occasionally, transport and care needs are best met by a rendezvous of BLS and paramedic units.

Pre-arrival notification of emergency rooms is often appropriate and always appreciated.

The following principles will help ensure the right decision:

- Always act in the best interest of the patient.
- When in doubt about the severity of the patient's injury or illness, play it safe and advise that the patient be transported to an emergency room.

SOAP IN EVALUATION AND REPORTING – Plan/Transport & Destination Decisions

- Do a careful exam and history. The assessment should be more detailed and complete on the patient to be left at home than on the patient to be transported.
- If the patient will be seen at a care facility, confirm that the facility agrees with that decision and is willing to see the patient.
- Prearrival contact with emergency rooms will avoid redirection.

Document findings carefully on the Medical Incident Report (MIR). Include the exam, history and details of any discussions with the patient, family or clinic about self-care, transportation, or treatment. Leave a copy of the completed MIR with the patient at the clinic or emergency room.

SOAP IN EVALUATION AND REPORTING – Plan/Transport & Destination Decisions

Standard Criteria For Transport Decisions

Leave At Scene	<ul style="list-style-type: none">▪ Minor illness or injury with little or no potential for patient to worsen▪ BLS Indicators▪ EMT feels confident that patient is responsible for self-care, or that another responsible party is present▪ EMT urges patient to call back if further concerns or problems arise▪ EMT recommends patient to follow up with private physician▪ Patient refusal signed ONLY if a) EMT believes patient SHOULD go to medical facility and b) patient refuses treatment/transportation
Privately Owned Vehicle (POV)	<ul style="list-style-type: none">▪ Minor illness or injury with little or no potential for patient to worsen▪ BLS Indicators▪ Further evaluation or treatment needed▪ Responsible and capable driver and transportation is available
BLS Aid Car/Private Ambulance	<ul style="list-style-type: none">▪ BLS Indicators▪ Further evaluation or treatment needed▪ Continued BLS assessment, oxygen or other treatment needed en route▪ No other responsible transport available▪ Patient requires stretcher for transport
ALS	<ul style="list-style-type: none">▪ ALS Indicators▪ Continued ALS assessment or treatment needed during transport

Standard Criteria For Destination Decisions

Self-Care	<ul style="list-style-type: none">▪ Minor illness or injury with little or no potential for patient to worsen▪ BLS Indicators▪ EMT feels confident that patient is capable for self-care, or that another capable party is present▪ EMT urges patient to call back if further concerns or problems arise▪ EMT recommends patient to follow up with private physician▪ Patient refusal signed ONLY if a) EMT believes patient SHOULD go to medical facility and b) patient refuses treatment/transportation
Clinic Or Doctor's Office	<ul style="list-style-type: none">▪ Minor illness or injury with little or no immediate potential for patient's condition to worsen▪ BLS Indicators▪ Need for further evaluation and treatment▪ Facility is available and capable of assessing and treating the patient▪ Facility agrees to see patient when notified▪ Patient has transportation to and from the facility considered
<i>Hospital Emergency Room</i>	<ul style="list-style-type: none">▪ Major or minor illness or injury with need for further medical evaluation and treatment▪ ALS or BLS Indicators▪ No other facility appropriate or available to see patient

Short Reports

The EMT must be prepared to make any of a series of reports about patients, both over the radio and in person. The ability to communicate --- with a few, well-chosen words --- an accurate picture is a mark of professionalism. The words can summon appropriate resources to the scene, assist responding paramedics to approach the scene focusing on the appropriate patient needs and speed the delivery of care. They can help an emergency room prepare to deal with an incoming patient

In general, an oral short report contains:

- Patient's age
- Chief complaint
- Mechanism of injury/Nature of illness
- Vitals, including characterizing pulse and respiration, if significant (i.e. "Pulse 88, weak and thready, irregular. Respirations 26, shallow, labored, irregular. Absent lung sounds, lower right.")
- Any significant information gathered from or about the patient that will help or should be considered ("History of two MIs in past six months.")
- Details appropriate to the person receiving the report.

If there are any significant changes after you deliver the first report, provide an update. Not every bit of information obtained is significant. The EMT's task is to sort and prioritize data, then communicate relevant information in a short report.

Hospital/Clinic Interaction

The EMT has a great impact upon the reputation and professional standing of the EMS system. This impact is greatest during the interaction with clinics and hospitals when patients are exchanged. Courteous, professional behavior is well rewarded. Some key steps include: calling ahead to the facility when bringing a patient, brief, concise clinical summaries to the person receiving the patient, clearly written, complete MIR reports describing the EMS intervention.

COMPLETION OF MEDICAL INCIDENT REPORT

Completion of Medical Incident Report (MIR)

MIR COMPLETION

Completion of the Medical Incident Report (MIR) is a critical step in BLS care. The MIR is a medical record which accurately reflects the patient's condition and BLS actions.

When To Complete A MIR	<ul style="list-style-type: none">▪ All patients▪ All responses, even when there is no patient▪ All responding agencies, BLS and paramedic▪ Patient refusal of care; if consent for treatment is refused, read the refusal statement to the patient, ask for a signature of statement and obtain signature of witness.▪ If patient refuses to sign the refusal statement, document on MIR. <i>Every unit dispatched should get credit for the response!</i>
Exceptions	<ul style="list-style-type: none">▪ Mass Casualty Incidents (MCI) patient▪ Dispatch error in requesting a unit
Why Complete A MIR?	<p>Although the MIR contains confidential information, many people read the document and it serves many functions:</p> <ul style="list-style-type: none">▪ The MIR is included in the patient's medical record and in the SOAP narrative describes the conditions and treatment delivered by EMS providers.▪ It provides documentation of what was done and what was not done.▪ MIR information justifies funding by fire districts, county and city councils. It is the basis for planning changes in EMS.▪ Research information for studies of EMS such as Criteria Based Dispatch, Telephone Referral Project, and Sudden Cardiac Death originated from the MIR.▪ Evaluation of the quality of patient care and system response as well as training depends on MIR data.
Who Completes A MIR?	The EMT who obtains a history and performs the physical exam should complete the (SOAP) narrative and sign the MIR. This person is responsible for the correct spelling, legibility, accuracy and completion of the information recorded on the MIR.

CONFIDENTIALITY OF THE MIR

Information obtained from patients by EMS personnel should be regarded as confidential. Specific items of information should be released only to those responsible for further medical care of the patient. MIR records should be protected from unauthorized and inappropriate examination. EMS databases should also be protected. Records should not be released to the press, law enforcement, or others seeking information unless legal requests are made. Each agency should develop a confidentiality policy. An example of the policy for Public Health – Seattle & King County EMS is in the Appendix.

Special Circumstances**EMS-LAW ENFORCEMENT, SEARCH & RESCUE INTERACTION/SCENE MANAGEMENT**

- Frequently EMTs will respond with Law Enforcement Officers and Search & Rescue personnel to certain 911 dispatches. A proactive local agreement and ongoing communication is necessary.
- Individual Fire Departments have specific operating policies specific to Law Enforcement involvement, in unsafe scenes, death, drug overdose, etc.

AEDs

- Several police departments, and some organizations, are now trained and equipped with AEDs. Use these resources as appropriate. In general, EMS personnel will be more experienced and therefore should assume medical control of the incident. In some cases, it may be possible for EMTs to continue using the attached AED.

Scenes that are unsafe or potentially violent

- Police are dispatched to all unsafe scenes involving weapons of any kind, violent patients, domestic violence, etc. Chapter 26.44 of Washington State Law requires registered, licensed, or certified personnel (among others) to report the abuse of children and vulnerable adults, who may or may not be part of an incident involving domestic violence. RCW 70.02.050 (1) (d) authorizes disclosure of patient information to the proper authorities when there is a reason to believe the patient is in imminent danger.
- Police are dispatched to all acts of terrorism, including suspicious substances. Hazmat responses to patients with symptoms include EMS personnel.

Extrication

- Fire department personnel are experts at techniques of extrication including the use of any special equipment that may be required and in rapid-extrication procedures when circumstances dictate such a rescue.

END OF LIFE ISSUES

END OF LIFE ISSUES

Emergency providers have always been involved in end-of-life events. The immediate response of the EMT to a dying person has usually been to work aggressively to prolong the life of the patient. In most cases, this is completely appropriate. However at times the patient's disease process is so advanced that no treatment – whether in a hospital or the field – will be beneficial.

We now have a greater understanding of, and support for, those who decide to die at home without aggressive intervention. There is increased recognition of the needs of others (primarily family and friends) in an end-of-life event, and accordingly, there are higher expectations of field providers. As a result of this, our society is changing its response to those with terminal illness, advanced age, or extensive medical history.

PROCEDURES

In general, an EMT can perform the following procedures at an expected natural death. Please refer to your department's policy for more information.

- Evaluate the patient and the situation.
- Check for patient's wishes, decisions, and documentation.
- If indicated, determine that no effort will be attempted, or cease efforts if started.
- Inform family of outcome and answer any questions they may have.
- Provide support to the family.
- Inform family of the procedure that will follow.
- Request police according to your department's policy.
- Gather information about the deceased:
 - * Name, age, date of birth
 - * Address and telephone number at the scene
 - * Medical history and medications
 - * Circumstances leading to the death
 - * Procedures done, if any
 - * Time of death
 - * Name and phone number of patient's physician
 - * Funeral home name and phone number
- Optional (follow departmental guidelines)
 - * Call the Medical Examiner (206-731-3232) to report an expected, natural, out-of-hospital death. Follow the voice prompts to speak to an investigator.
 - * Provide the information requested.
 - * The Medical Examiner will issue a No Jurisdiction Assumed (NJA) number.
 - * Contact the funeral home and give them the NJA number.
 - * Request clergy if requested. Department chaplains may be available, follow policy.
 - * Once the NJA number has been issued, EMS personnel can leave the scene, it is not necessary to wait for the funeral home.

END OF LIFE ISSUES – Procedures

- * **IMPORTANT:** If no NJA number is provided, or if the circumstances seem suspicious or unexpected in any way, request the police or the medical examiner and wait for them to arrive.

The family is experiencing a profound loss; be respectful and aware of general demeanor at the scene. Every end-of-life event is different. Deaths range from the tragic and incomprehensible death of a child from a traumatic event, to the quiet and expected death of an elder, at home surrounded by loved ones. Over time, each EMT will develop his or her own way of handling such an event. Keep the following guidelines in mind:

- People call 9-1-1 for a variety of reasons, not necessarily because they expect or want an aggressive resuscitation effort. When in doubt, ask.
- Reactions to death – even an expected death – are unpredictable, and may include anger, apathy, resignation, guilt, and shock.
- When possible, choose one EMT to communicate with the family, in order to provide continuity at a chaotic time. Details of the death should be provided with simple, direct, honest words.
- As long as they are not disruptive, family members can be permitted to view an ongoing resuscitation. When possible, keep them informed during the proceedings. Be honest: prepare them for the likelihood of death. If a gravely ill patient is being transported and if time permits, family can be encouraged to come up and touch or say something to the patient; if the person does not survive, the family may derive some comfort from this.
- If efforts have ceased, the family may want to see and touch the deceased. If an NJA number has been obtained, consider putting the person back in bed or covering with a blanket or sheet.
- Offer to contact family, friends, or clergy. Refer to support groups if appropriate (See Community Resources in the Appendix)

Every competent adult has the right to make decisions about his or her health care. These decisions may determine whether or not a resuscitation should be attempted in the event of a cardiac arrest. EMTs have the responsibility to determine a patient's resuscitation wishes, and honor them if possible.

Attempted resuscitation efforts may be withheld or stopped in ANY of the following:

- Injuries incompatible with life
- Lividity, rigor mortis
- A valid Washington State EMS No CPR directive or bracelet
- A physician-signed DNAR directive other than the EMS No CPR directive. This directive may be in the POLST (Physician Orders For Life-Sustaining Treatment) format. This is based on patient's wishes and medical indication. It summarizes any advance directives.
- "Compelling reasons" can be invoked when written information is not available, yet the situation suggests that the resuscitation effort will be futile, inappropriate, and inhumane. A resuscitation effort may be withheld when the following two conditions are BOTH met:
 - 1) **Extensive medical history such as terminal illness or long-standing, intractable disease**
 - 2) **Request from the family that no resuscitation effort be attempted**

END OF LIFE ISSUES – Procedures

The EMT should specifically ask the family about their resuscitation wishes or the presence of advanced directives.

If a resuscitation effort has been initiated and the EMT is provided with an advanced directive or compelling reasons that such an effort should be withheld, the resuscitation should be stopped.

Documentation is important. On the MIR, describe the patient's medical history, presence of advanced directive if any, or verbal request to withhold resuscitation efforts.

“Do not attempt resuscitation” does not mean “do not care.” A dying patient for whom no resuscitation effort is indicated can still be provided with supportive or palliative measures, which may include the following:

- Clear the airway (including stoma) of secretions with suction device.
- Provide oxygen using a cannula or non-rebreather.
- Control any bleeding.
- Provide emotional support to patient and family.
- Contact the patient's private physician.
- Contact HOSPICE if involved.
- Paramedics should be called if additional judgment or support is needed.

Supportive measures provide comfort for the patient who has chosen to allow death to occur naturally. They do not include resuscitative measures such as chest compressions, artificial ventilation (use of bag-valve-mask), intubations, IVs, etc.

EMS providers must respect the right of a patient to make his or her own health-care decisions. Acting contrary to a patient's wishes may risk liability. Advanced directives or verbal requests by family members conveying patient's wishes are the expression of an individual's decision about his or her health care. **When in doubt, initiate resuscitation.**

Specific Conditions

Soft Tissue Injury

DEFINITION

Soft tissue injury occurs when one or more of the skin, dermis, fatty tissue, muscle, ligaments, and tendons are damaged by mechanical forces of accidents, falls, or other traumatic events

COMMON COMPLAINTS

The patient will complain of an event (the mechanism of injury) which caused the injury as well as pain, decreased mobility, and anxiety associated with it.

SUBJECTIVE KEYS

Mechanism of injury (What happened to the patient? What caused the injury?). SAMPLE and OPQRST as appropriate.

OBJECTIVE KEYS

Initial assessment of Central Nervous System, Airway and Circulation, Description of injury, Evaluation of neurovascular function, Monitoring of vital signs.

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Significant head injury▪ Hypotension (systolic blood pressure < 90)▪ Soft tissue injuries that might compromise the airway▪ Excessive uncontrolled bleeding▪ Important co-morbidity▪ Altered level of consciousness▪ High index of suspicion based on mechanism of injury	<ul style="list-style-type: none">▪ Conscious and alert▪ Stable vital signs▪ Soft tissue injuries limited to the superficial layer of the skin (epidermis & dermis)▪ Single digit amputations▪ Soft tissue injuries, with bleeding controlled by direct pressure and/or elevation

PLAN

BLS Care For Open Soft Tissue Injuries

- Request ALS if indicated
- Provide supplemental oxygen and/or ventilatory assistance as necessary
- Maintain an open and patent airway
- Ensure adequate breathing
- Control bleeding
- Maintain normal body temperature
- DICES

SOFT TISSUE INJURY – Plan/Open Soft Tissue Injuries

- * **D**irect pressure over an open wound with a gloved hand, and then apply a dry, sterile compression dressing over the entire wound. Maintain pressure with a roller bandage. If bleeding continues or reoccurs, leave original dressing in place and apply second dressing on top of first, securing it with another roller bandage
 - * **I**ce or cold pack (for closed soft tissue injury only) to slow bleeding by causing blood vessels to constrict and also reduce pain
 - * **C**ompress down over the dressing with a roller bandage to slow bleeding by compressing the blood vessels and secure the dressing
 - * **E**levate injured part just above the level of the patient's heart to decrease swelling. Use pressure point if bleeding continues
 - * **S**plint and immobilize all soft-tissue injuries to decrease bleeding and also reduce pain
- Monitor vital signs
 - Cervical spine protection, if indicated
 - Warm aid car temp to 70° F or warmer

Special Instructions For Open Soft Tissue Injuries

- **BLEEDING.** Control bleeding with direct pressure on the area or upon pressure points. Use tourniquet for severe, uncontrolled bleeding.
- **AMPUTATION.** Wrap amputated parts in sterile dressings. Place the amputated part in a watertight container and then into a second container. Place the container on ice. Do not submerge the amputation in water or place directly on ice. Rapid transport of the patient and the severed part is critical to the success of re-implantation. If transport of the patient is delayed, consider sending the amputation ahead to be surgically prepared.
Do not use dry ice to cool a severed part. Ice or chemical cold packs are acceptable.
- **DEBRIDEMENT.** Large, easily removed debris, such as glass, splinters, or gravel can be removed before bandaging. Large, deeply imbedded fragments or projectiles should be secured in place by the bandage.
- **DECONTAMINATION.** Removal of a wet chemical, e.g. acid, should be accomplished by repeated flushing. Removal of a dry substance is accomplished by first brushing the area and then by flushing.
- **BURNS.** Easily removed debris should be taken off the burned area, then the area can be covered by dry, sterile dressings.

SOFT TISSUE INJURY – Plan/Closed Soft Tissue Injuries

BLS Care For Closed Soft Tissue Injuries

Type	Treatment
Contusion Ecchymosis Hematoma Edema	<ul style="list-style-type: none">▪ Reassure▪ Immobilize/splint if indicated▪ Ice or cold pack▪ Elevate
Sprain/Strain	<ul style="list-style-type: none">▪ Reassure patient▪ Gently support the site▪ Note, record distal circulation and nerve function▪ Apply ice pack to sprain/strain area▪ Splint and immobilize injured limb▪ Elevate injured limb▪ Arrange for transport to appropriate care
Dislocation	<ul style="list-style-type: none">▪ Reassure patient▪ Gently support limb▪ Note, record distal circulation and nerve function▪ Apply ice pack to area▪ Splint and immobilize injured limb in position found▪ Again note, record distal circulation and nerve function▪ Mandatory transport to hospital ER

Transport Decisions

Standard criteria for:

- **Leave At Scene**
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**

Plus: Consider specific facilities for specific conditions (e.g. Level I Trauma, Level III/IV Trauma, Pediatric Center)

HARD TISSUE INJURY

Hard Tissue Injury

DESCRIPTION

Hard tissue injuries include conditions that involve the skeleton, skeletal muscles, tendons, joints, ligaments, and articular cartilage. Significant force is usually required to cause a fracture or dislocation. Complications of hard tissue injury may include damage to vital organs, blood loss, complicating co-morbid conditions, and the presence of drugs and alcohol.

COMMON COMPLAINTS

Common complaints include the description of the injury and the circumstances. These are most commonly automobile accidents, falls, athletic injuries, but may include gunshot wounds, stabbing, crushing and other mechanisms.

SUBJECTIVE KEYS

The mechanism of injury should include the amount of energy that caused the injury. A search for complaints related to major organ injury, co-morbidities, and other causes of complications should be conducted.

OBJECTIVE KEYS

Signs of hard tissue injuries include:

<ul style="list-style-type: none">▪ Swelling▪ Pain and tenderness▪ Bleeding▪ Limited movement▪ Deformity (compare to uninjured hard tissue)	<ul style="list-style-type: none">▪ Crepitus▪ Absence of distal pulses, motor function and sensation▪ Shock (hypotension, cool, pale and clammy skin, rapid pulse, anxiety)
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ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Decreased/altered level of consciousness▪ Hypotension (systolic blood pressure < 90)▪ Excessive uncontrolled bleeding▪ Pelvic fracture, bilateral femur fracture, or multi-system injury/fractures▪ High index of suspicion based on mechanism of injury	<ul style="list-style-type: none">▪ Single extremity fracture with stable vital signs▪ Single joint dislocation with stable vital signs

PLAN

BLS Care

- **Request paramedics if indicated**
- Protect cervical spine if indicated.
- Reassure and maintain normal body temperature.
- Apply direct pressure and sterile dressing over any bleeding.

HARD TISSUE INJURY – Plan/BLS Care

- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Nothing by mouth.
- Gently support injured part.
- Allow patient to choose position of comfort.
- Check and record distal circulation and nerve function.
- Mobilize and splint if indicated.
- Apply cold/ice pack to injured part (for closed tissue injury only).
- Elevate fractured limb.
- Prepare aid car temperature to 70 F or warmer.
- Prepare patient for transport (backboard, scoop stretcher).
- Monitor patient's vital signs every 5-10 minutes.

Special Instructions For Hard Tissue Injuries

- **REALIGNMENT OF LONG BONE FRACTURES.** Attempt to realign fractures of long bones, which occur in the middle 2/3, then splint. Long-bone fractures, which occur in the proximal or distal 1/3, should be realigned only if compromise of distal circulation or nerve function is detected.
- **PELVIC FRACTURES.** Immobilization of these fractures should be accomplished by use of a bed sheet. Fold sheet lengthwise into 8" – 12" width. Place beneath patient, wrap ends around patient, crossing over pelvic area. Tie sheet with square knot to apply moderate side-to-side and front to back pressure. Secure the ends to the backboard.
- **MULTIPLE EXTREMITY FRACTURES.** These patients should be secured to a backboard, which will serve as a splint for several sites.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Except: Most patients with hard tissue injury will require transport
- **Privately Owned Vehicle (POV)**
Except: Transport must maintain splinting and other BLS measures
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
Except: Most hard tissue injuries will not respond to self-care
- **Clinic Or Doctor's Office**
Except: Patients on backboard may be refused by clinics
Except: Patients with hard tissue injury will require an x-ray for diagnosis
- **Hospital Emergency Room**
Except: Consider specific facilities for specific conditions (e.g. Level I Trauma, Level III/IV Trauma, Pediatric Center)

HEAD & NECK INJURIES

Head & Neck Injuries

DESCRIPTION

Accidental injury of the head and neck occurs frequently with falls, sports injuries, motor vehicle accidents and motor vehicle-pedestrian accidents.

COMMON COMPLAINTS

Injury to the head and neck may be reported acutely or sometime after the injury. Localizing complaints include pain, numbness, loss of sensation or motor function and altered level of consciousness.

SUBJECTIVE KEYS

- Significant mechanism of injury
- Transient loss of consciousness
- Amnesia or repetition of questions after blow to head
- Diving accident
- Drowning with unknown cause
- Fall from height greater than 10 feet
- Electrocution
- Explosion
- Drugs and alcohol
- Numbness, tingling, “pins and needles” sensations
- Burning pain

OBJECTIVE KEYS

- Altered level of consciousness
- Glasgow Coma Scale determination
- Posturing (abnormal flexion or extension)
- Initial vital signs
- Pain along the spine with or without movement
- Tenderness along the spine
- Loss or impairment of sensation
- Weakness in the extremities
- Paralysis
- Significant injury above the femur
- Gunshot wound to neck, chest, abdomen, pelvis or groin

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Major mechanism of Injury▪ Any abnormality in Glasgow Coma Scale (Score of < 15)▪ Compromised airway▪ Abnormal respiratory patterns▪ Paresis and/or parenthesis▪ Unstable vital signs▪ Hypotension (systolic blood pressure < 90)▪ Evidence of injury to brain or spinal cord▪ Significant alcohol or drug use	<ul style="list-style-type: none">▪ Minor mechanism of injury▪ Intact airway▪ Stable vital signs▪ Normal blood pressure▪ No evidence of injury to brain or spinal cord▪ No significant drugs or alcohol

PLAN

BLS Care

- **Request paramedics if indicated.**
- Ensure a patent airway.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Provide in-line cervical stabilization, with proper sizing and padding.
- Secure to backboard.
- Trendelenburg position for hypotension.
- Bandage as necessary.
- Monitor vital signs and neurologic status.

Special Instructions For Suspected Cervical Injury

- **Suspected cervical injury with non-alignment.** Realign neck to neutral position unless new pain, new numbness, tingling or weakness, new compromise of airway or ventilation or resistance encountered. Apply cervical collar and backboard. If unable to realign then secure in the original position.
- **Helmet Removal.** Leave helmet in place if it stabilizes head and does not impair breathing or airway. If helmet needs to be removed, two EMTs should open face guard, stabilize neck and head, remove chinstrap, remove helmet while stabilizing head, and apply cervical collar and backboard.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Except: Most patients with head and neck injury will require transport
- **Privately Owned Vehicle (POV)**
Except: Transport must maintain splinting and other BLS measures
- **BLS Aid Car/Private Ambulance**
Except: Patient requires backboard and cervical immobilization for transport
- **ALS**

HEAD & NECK INJURIES – Plan/Destination Decisions

Destination Decisions

Standard criteria for:

- **Self-Care**
Except: Most head and neck injuries will not respond to self-care
- **Clinic Or Doctor's Office**
Except: Patients on backboard may be refused by clinics
Except: Patients with hard tissue injury will require an x-ray for diagnosis
- **Hospital Emergency Room**
Except: Consider specific facilities for specific conditions (e.g. Level I Trauma, Level III/IV Trauma, Pediatric Center)

Respiratory Emergencies**DESCRIPTION**

Respiratory emergencies are a group of clinical syndromes that result from impairment of airway, lung, or heart function. They range from conditions that are minor and self limited, e.g. a cold, to severe life threatening conditions, e.g. unremitting asthma, anaphylaxis, pulmonary embolus, congestive heart failure, pneumothorax.

COMMON COMPLAINTS

Shortness of breath and breathlessness are common and may be associated with weakness, fever, cough, pain, or palpitations.

SUBJECTIVE KEYS

- Difficulty breathing
- Shortness of breath
- Anxiety
- Headache
- Exhaustion

OBJECTIVE KEYS

- Level of consciousness and baseline vital signs
- Inability to take a deep breath, talking limited by dyspnea
- Agitation
- Confusion
- Paresthesias
- Exam of neck, head, chest
- Lung sounds (anterior and posterior)
- Respiratory rate, depth, effort, and pattern
- Skin – cyanosis, pallor, hives, or rashes
- Position - upright, leaning forward
- Use of accessory muscles, chest retractions
- Monitor vitals signs and compare to baseline every 5-10 minutes

RESPIRATORY EMERGENCIES – Assessment

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Decreased level of consciousness▪ Extreme anxiety and agitation▪ Tripod position▪ Ashen color, cyanosis▪ Failure to respond to usual treatments▪ Respirations < 8/min or > 30/min▪ Labored respirations regardless of rate when found with other indicators▪ Audible wheezing, rales when found with other indicators▪ Use of EpiPen auto injector	<ul style="list-style-type: none">▪ Respiratory complaints due to common causes such as a cold, flu, bronchitis▪ Respiratory complaints of a chronic but stable nature▪ Respiratory complaints with normal vital signs and adequate oxygenation with treatment▪ Patent airway

PLAN

BLS Care

- **Request paramedics if indicated**
- Reassure patient and try to keep them calm.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Assist patient with own medications.
- EpiPen if indicated.
- Position patient/prepare patient and scene for transport.
- Monitor vital signs every 5 to 10 minutes depending on patient's condition.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Plus: Patient who has treated his/her chronic condition satisfactorily and desires to be left at home
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
Plus: Patient who has treated his chronic condition satisfactorily and desires to be left at home
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**

Chest Pain**DESCRIPTION**

EMTs are commonly dispatched for chest pain. Causes include: pain from the chest wall, pain from the lungs and pleura, pain from structures in the mediastinum including the heart and great vessels, pain referred from the abdomen, and pain of non-organic origin. The conditions causing the complaint range in severity from minimal (e.g. a chest wall bruise) to catastrophic (e.g. a dissecting thoracic aortic aneurysm).

COMMON COMPLAINTS

The complaint of chest pain may include: chest pressure, chest discomfort, and indigestion. The discomfort may be associated with weakness, shortness of breath, fainting or other less specific complaint. Patients who complain of skipped beats, fluttering, excessive weakness, near syncope or palpitations may have a cardiac arrhythmia.

SUBJECTIVE KEYS

- Chest pain, discomfort, pressure
- Shortness of breath
- Palpitations, heart fluttering
- Indigestion, nausea
- Weakness
- Symptom with walking, with arm motion, with breathing, with touching, with lying
- Feeling of stress, anxiety
- Medications used for cardiac conditions
- Diabetes

OBJECTIVE KEYS

- Vital signs
- Inability to take a deep breath
- Local tenderness
- Skin color/sweating
- Cardiac arrhythmia

CHEST PAIN – Assessment

ASSESSMENT

Pain from the chest wall	<ul style="list-style-type: none">▪ Traumatic contusion – rib fracture or bruising, muscle tear, tendon strain▪ Muscle strain▪ Overuse syndromes – rotator cuff tear▪ Breast cysts and infections▪ Shingles – a herpetic rash characterized by redness and blisters▪ Costochondritis – inflammation of rib cartilage
Pain from the lungs and pleura	<ul style="list-style-type: none">▪ Pleuritic pain – pleurisy, pneumonia, pneumothorax, Pulmonary embolus▪ Asthma, bronchitis, upper respiratory infection (URI)
Pain from the mediastinum	<ul style="list-style-type: none">▪ Cardiac and great vessel pain – MI and angina, dissection of a thoracic aneurysm▪ Esophageal pain – esophagitis, esophagus spasm, heartburn, reflux▪ Pericardial pain – pericarditis▪ Mediastinal air from ruptured bronchus
Pain referred from the abdomen	<ul style="list-style-type: none">▪ Gallbladder – cholecystitis, gallstones▪ Stomach, esophagus – gastritis, esophagitis▪ Pancreas – pancreatitis
Non-organic chest pain (psychosomatic pain)	<ul style="list-style-type: none">▪ Stress▪ Hyperventilation▪ Panic attack

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Chest pain of myocardial ischemia (angina or MI)▪ Chest pain with respiratory distress▪ Hypotension (systolic blood pressure < 90)▪ Chest Pain with heart rate > 120▪ Chest Pain with heart rate < 50▪ Altered level of consciousness	<ul style="list-style-type: none">▪ Chest wall pain▪ Non-organic pain▪ Pleuritic-pulmonary pain with stable vital signs and adequate ventilation▪ Stable/normal vital signs

PLAN

BLS Care

- **Request paramedics if indicated**
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Assist patient with nitroglycerin if indicated.
- Position of comfort.
- Reassure patient.
- Monitor vital signs every 5 minutes.
- Monitor ECG if authorized, record strip.

Transport Decisions

Standard criteria for:

- **Leave At Scene**

Except: Patients with cardiac chest pain require ALS transport to emergency room

Except: In patients with the established diagnosis of angina, who have had a typical anginal episode for him (i.e. lasted no longer than usual and was not more severe than usual and responded to nitroglycerin in the usual way) may be left at the scene

- **Privately Owned Vehicle (POV)**

Except: Patients with cardiac chest pain require paramedic transport to emergency room

- **BLS Aid Car/Private Ambulance**

Except: Patients with cardiac chest pain require paramedic transport to emergency room

- **ALS**

Except: Patients with cardiac chest pain require paramedic transport to emergency room

Destination Decisions

Standard criteria for:

- **Self-Care**

Except: Patients with cardiac chest pain require paramedic transport to emergency room

Except: In patients with the established diagnosis of angina, who have had a typical anginal episode for him (i.e. lasted no longer than usual and was not more severe than usual and responded to nitroglycerin in the usual way) may be left at the scene

- **Clinic Or Doctor's Office**

Except: Patients with cardiac chest pain require paramedic transport to emergency room

- **Hospital Emergency Room**

Except: Patients with cardiac chest pain require paramedic transport to emergency room

STROKE

Stroke

DEFINITION

Stroke, brain attack, or cerebrovascular accident (CVA) is the term used to describe injury or death of brain cells either from interruption of blood supply by vascular obstruction or hemorrhage into the brain tissue.

COMMON COMPLAINT

Sudden onset, loss of one or more cerebral functions such as speech, vision, control of limbs, or altered level of consciousness.

SUBJECTIVE KEYS

- Complaints of abnormal speech
- Complaints of abnormal movement, paralysis
- Complaints of abnormal vision
- Complaint of severe headache
- Risk factors for stroke (hypertension, diabetes, coronary disease, smoking)
- Time of stroke symptom onset (fibrinolytic treatment must occur within 3 hours)
- Contraindications to fibrinolysis (recent surgery, recent trauma, bleeding tendencies)

OBJECTIVE KEYS

- Gag and swallow reflexes
- AVPU scale
- Vital signs, consider posturals
- Cincinnati Prehospital Stroke Scale

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Unconsciousness▪ Decreased level of consciousness▪ Severe hypertension (systolic blood pressure > 220)▪ Seizures▪ Severe headache▪ Patient unable to protect airway	<ul style="list-style-type: none">▪ Vital signs and condition stable▪ CVA history▪ CVA signs▪ Airway secure

PLAN

BLS Care

- **Call paramedics if indicated.**
- Position patient in upright position.
- Open and manage airway.
- Deliver high flow oxygen, ventilatory assistance as necessary.
- Maintain normal body temperature.
- Protect paralyzed limbs.
- Monitor vital signs.

Revascularization by fibrinolysis must be initiated within three (3) hours of a stroke. If a stroke is of recent onset (less than three (3) hours) very short scene times and transport times are critical.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Except: All stroke patients require transport
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
Except: No stroke patients are eligible
- **Clinic Or Doctor's Office**
Except: No stroke patients are eligible
- **Hospital Emergency Room**
Except: All stroke patients

DIABETIC EMERGENCIES

Diabetic Emergencies

DESCRIPTION

The most frequent EMS emergency for diabetic patients is hypoglycemia. Low blood sugars usually arise from treatment with too much insulin, often with insufficient diet, or co-morbidities. Hyperglycemia is also common, but usually without major symptoms until it is complicated by diabetic ketoacidosis (DKA).

COMMON COMPLAINTS

The patient will usually recognize his difficulty and complain of low blood sugar or high blood sugar. Serious hypoglycemia may result in unconsciousness, while hyperglycemia can exist with less dramatic symptoms. Patients will frequently measure their own blood sugars.

SUBJECTIVE KEYS

Hyperglycemia	Hypoglycemia
<ul style="list-style-type: none">▪ Polyphagia – excessive food intake▪ Polydipsia – intense thirst▪ Polyuria – excessive frequency and amount of urine▪ Vomiting, abdominal pain▪ ‘Flu-like’ symptoms, nausea▪ Insufficient insulin dosage▪ Gradual onset▪ Normal activity level▪ Infection common	<ul style="list-style-type: none">▪ Insufficient food intake▪ Excessive insulin dosage▪ Rapid onset▪ Normal to excessive activity level▪ Absent thirst▪ Intense hunger▪ Headache

OBJECTIVE KEYS

Hyperglycemia – Diabetic Coma	Hypoglycemia
<ul style="list-style-type: none">▪ Altered level of consciousness – restless to coma▪ Warm and dry skin▪ Hypotension (systolic blood pressure < 90)▪ Blood-sugar level (if obtained)▪ Rapid, weak pulse▪ Reduced circulation in extremities▪ Vomiting▪ Sweet, fruity breath▪ Kussmaul breathing (deep, rapid)▪ Measurement of blood sugar by patient<ul style="list-style-type: none">▪ > 200 mild hyperglycemia▪ > 300 without symptoms moderate hyperglycemia▪ > 300 or symptoms in any level, severe hyperglycemia	<ul style="list-style-type: none">▪ Irritability, confusion, seizures or coma▪ Pale, moist skin▪ Normal or rapid breathing▪ Normal or rapid and full pulse▪ Flushed skin▪ Sweating▪ Measurement of blood sugar < 80 by patient

DIABETIC EMERGENCIES – Assessment

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Unconscious▪ Absent or depressed gag reflex, unable to swallow▪ Patient unable to protect airway▪ Hypotension (systolic blood pressure < 90)▪ Heart Rate > 120▪ Failure to respond to oral glucose▪ Diabetic ketoacidosis	<ul style="list-style-type: none">▪ Normal or mild reduction in level of consciousness▪ Gag reflex intact, can swallow▪ Normal vital signs▪ Patient can protect airway▪ Symptoms of hypoglycemia relieved by oral glucose▪ Hyperglycemia with normal vital signs

PLAN

BLS Care

- **Request paramedics if indicated.**
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- If hypoglycemic and gag intact; position upright and give oral glucose.
- If hypoglycemic, gag absent, position on side, give oxygen, ventilation and await paramedics.
- Maintain normal body temperature.
- Monitor vital signs in response to sugar.
- If hyperglycemic without symptoms and blood sugar > 200 (mild or moderate hyperglycemia), contact private physician by patient or BLS.
- If hyperglycemic with symptoms or blood sugar > 300 (severe hyperglycemia), BLS transport to emergency room.

If in doubt and swallowing ability is intact, position upright and give oral glucose.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Plus: Patient with hypoglycemia who has responded to oral glucose may be left at scene
- **Privately Owned Vehicle (POV)**
Except: Patient with hyperglycemia or hypoglycemia should not drive self
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
Plus: Patient with hypoglycemia who has responded to oral glucose may provide self-care and left at scene
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**

SPECIFIC CONDITIONS

OB/GYN**Obstetrics****DESCRIPTION**

Obstetrical emergencies for EMTs are problems of pregnancy and childbirth whether normal or complicated. Normal delivery will involve the EMT / FR only if it is unexpected. Complications of pregnancy, including trauma, diabetes, vaginal bleeding, hypertension, ectopic pregnancy, and false labor frequently require EMT evaluation.

COMMON COMPLAINTS

During pregnancy, complaints of bleeding, with or without pain, often occur.

SUBJECTIVE KEYS

For Bleeding	For Lower Abdominal/Pelvic Pain	For Unexpected Field Delivery
<ul style="list-style-type: none">▪ Establish likelihood of pregnancy (water broken?)▪ How much?▪ When?▪ Menses?▪ Medications▪ Birth control▪ Associated with pain and other functions?▪ Other medical problems?▪ Obstetric history (number pregnancies, deliveries, complications, miscarriages)	<ul style="list-style-type: none">▪ Establish likelihood of pregnancy (water broken?)▪ Location/radiation?▪ Character?▪ Duration/timing?▪ Relationship to bodily functions?▪ OPQRST?	<ul style="list-style-type: none">▪ Number of previous pregnancies/deliveries▪ Length of labor during previous pregnancies?▪ Frequency of contractions?▪ The maternal urge to push?▪ Feelings similar to that of a bowel movement?

Many patients do not realize they are pregnant, and may complain of pain and bleeding due to spontaneous abortion or ectopic pregnancy in early pregnancy.

OBJECTIVE KEYS

<ul style="list-style-type: none">▪ Level of consciousness▪ Respirations▪ Pulse▪ Blood pressure▪ Crowning	<ul style="list-style-type: none">▪ Skin color, temperature, and turgor▪ Pupil reaction
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OB/GYN – Obstetrics/Objective Keys

For Bleeding	For Pain	For Delivery
<ul style="list-style-type: none">▪ External observation of blood▪ Excessive bleeding is present check for signs of shock▪ Monitor blood pressure and heart rate	<ul style="list-style-type: none">▪ Masses (above the umbilicus usually indicative of third trimester pregnancy)▪ Contractions▪ Distention▪ Guarding▪ Tenderness	<ul style="list-style-type: none">▪ Establish interval and timing of contractions▪ Observe for crowning

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Imminent birth▪ Decreased/alterd level of consciousness of mother/new- born baby▪ Abnormal blood pressure (< 90 systolic, or > 140 systolic)▪ Complications with this pregnancy▪ Pelvic pain▪ Vaginal bleeding▪ Trauma to mother during 3rd trimester▪ Multiple births▪ Breach/limb presentation▪ Prolapsed cord▪ Shoulder distocia▪ Post partum hemorrhage – uncontrolled▪ Seizures▪ Dispatch to birthing center/midwife	<ul style="list-style-type: none">▪ Early pregnancy, pain or bleeding with stable vital signs▪ Childbirth without complications and mother and baby stable

PLAN

BLS Care

- **Request paramedics if not dispatched.**
- Reassurance and emotional support.
- Monitor vital signs.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Nothing by mouth.
- Allow patient to choose position of comfort (Supine hypotension may occur if patient is flat on their back).

Imminent Delivery (Specific Instructions)

- Prepare delivery area (out of public view).
- Position mother in semi-Fowler's position.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Encourage mother to breath deeply between contractions & push with contractions.
- Prepare OB equipment and don sterile gloves and gowns.
- As baby crowns, support head with gentle pressure and avoid explosive birth.
- If membrane is still intact, rupture with your fingers to allow amniotic fluid to leak out.
- If cord is around the baby's neck, gently slip it over the head. Do not force it!
- If the cord is too tight to slip over the head, apply umbilical cord clamps and cut.
- As soon as baby's head emerges suction the mouth and nose with bulb syringe.
- Allow the mother to push and support the head as it rotates.
- Caution, babies are slippery as they exit the birth canal, be careful and alert.
- Place two clamps on the cord two inches apart and six inches away from the baby.
- Suction baby again.
- Dry and inspect the cord for bleeding.
- Wrap baby in warm blanket.
- Place baby on its side to facilitate drainage.
- Inform the mother of the baby's gender.
- Note the time of birth, APGAR score of baby.

APGAR SCORING

APGAR Scoring was developed to evaluate the condition of a newborn at 1 and 5 minutes after birth. Consider use of the APGAR score in the assessment of newborns to determine if resuscitation efforts are needed.

Clinical Sign		0 points	1 point	2 points
A	Appearance	Blue, pale	Body pink, extremities blue	Completely pink
P	Pulse	Absent	< 100	> 100
G	Grimace	No response	Grimaces to stimulation	Cries
A	Activity	Limp	Some flexion of extremities	Active motion
R	Respiratory Effort	Absent	Slow, irregular	Strong cry or respirations

Post Delivery

- Observe perineum for bleeding. Normally there should be a small to moderate amount of bloody material that will ooze from the vagina.
- Do not pull on the umbilical cord.
- The placenta should be delivered spontaneously in 5-10 minutes.
- If delivered, send the placenta with the mother and baby to the hospital.
- Massage the uterine fundus with moderate firmness to encourage further uterine contraction.
- Monitor vital signs of both mother and infant.
- Maintain body temperature of both.
- BLS transport of both to hospital, if no ALS indicators.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Plus: Delivery at home with midwife in attendance and patient agrees to no transport
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
Plus: Minor illness of early pregnancy with little or no potential for patient to worsen
Plus: Uncomplicated delivery at home with midwife in attendance and patient agrees to home care
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**
Plus: Consider specific facilities for specific conditions (e.g. prenatal care clinic for complicated pregnancies)

OB/GYN – Gynecological Emergencies

Gynecological Emergencies

DESCRIPTION

GYN emergencies are those conditions of the female reproductive organs usually associated with pain or bleeding, but not with pregnancy and childbearing.

COMMON COMPLAINTS

Vaginal bleeding, and lower abdominal pain are the usual symptoms of a GYN emergency due to abnormalities of the menstrual cycle, pelvic organ inflammation, tumors of the uterus and vagina, and bladder infections. Complications of early pregnancy may cause similar complaints.

SUBJECTIVE KEYS

For Bleeding	For Pain
<ul style="list-style-type: none">▪ How much?▪ When?▪ Likelihood of pregnancy?▪ Medications▪ Birth control▪ Menses?▪ Associated with pain and other functions▪ Are there other medical problems?▪ Obstetric history (number pregnancies, deliveries or miscarriages?)	<ul style="list-style-type: none">▪ Location/radiation?▪ Character?▪ Duration/timing?▪ Relation to bodily function▪ OPQRST?

OBJECTIVE KEYS

<ul style="list-style-type: none">▪ Level of consciousness▪ Respirations▪ Pulse▪ Blood pressure▪ Level of pain	<ul style="list-style-type: none">▪ Skin color, temperature, turgor▪ It may be necessary to inspect the patient's perineum. Document the character of the discharge, including color, amount, and the presence or absence of clots.
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For Bleeding	For Pain
<ul style="list-style-type: none">▪ External observation of blood▪ Excessive bleeding is present, check for signs of shock▪ Monitor blood pressure and heart rate	<ul style="list-style-type: none">▪ Masses (above the umbilicus usually indicative of third trimester pregnancy)▪ Distention▪ Guarding▪ Tenderness

OB/GYN – Gynecological Emergencies/Assessment

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Decreased/altered level of consciousness▪ Hypotension (systolic blood pressure < 90)▪ Severe unremitting pelvic pain with high likelihood of unstable condition during BLS transport▪ Excessive vaginal bleeding	<ul style="list-style-type: none">▪ Limited vaginal bleeding with stable vital signs▪ Pelvic pain or discomfort with normal vital signs

PLAN

BLS Care

- **Request paramedics if indicated.**
- Reassurance and emotional support.
- Monitor vital signs.
- Direct pressure over lacerations.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Nothing by mouth.
- Allow patient to choose position of comfort.
- Consider timing of police notification of sexual assault incidents.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**

ALTERED LEVEL OF CONSCIOUSNESS

Altered Level of Consciousness

DESCRIPTION

Symptoms of abnormal brain function are frequent complaints of EMS patients. Primary causes, those that result from intrinsic brain dysfunction, include seizures, stroke, head trauma and overdoses. Secondary causes of abnormal brain function usually result from lack of oxygen or sugar to the brain from circulatory, pulmonary or metabolic dysfunction.

COMMON COMPLAINTS

For EMTs the most common dispatch in this category is for seizure in a patient with a seizure history. The complaint “light headed” or “dizzy,” drug overdose or behavior abnormality also occurs. Pediatric febrile seizures are also a common dispatch.

SUBJECTIVE KEYS

- Bystanders’ description of altered consciousness
- Report of seizures
- Report of drug or alcohol ingestion
- Past history of illness, medication
- Pill bottles
- Suicide notes

OBJECTIVE KEYS

- Vital signs
- Posturals, if syncope
- AVPU scale, (Awake and Alert, Responsive to Verbal stimulus, Response to Pain, Unresponsive)
- Focal neurologic findings
- Monitor airway

Common Responses In Patients With Overdoses:

Sedatives, tranquilizers	Altered level of consciousness, CNS depression, respiratory and circulatory depression, dilated pupils
Narcotics (morphine, heroin, codeine)	Decreased level of consciousness, respiratory depression progressing to arrest, constricted pupils
Stimulants (cocaine, methamphetamine, ephedrine)	Agitation, anxiety, seizures, hypertension, tachycardia
Antidepressants (tricyclic anti-depressants include Nortriptyline, Doxepin, etc.)	Decreased level of consciousness which may progress rapidly to unresponsiveness, seizures, hypotension, cardiac arrhythmias
GHB (gamma hydroxybutyrate)	Altered level of consciousness, ranging from agitation to drowsiness; seizures; respiratory depression
Alcohol	Decreased level of consciousness, respiratory depression

ALTERED LEVEL OF CONSCIOUSNESS – Assessment

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Unconscious▪ Respiratory distress or airway compromise▪ Hypotension (systolic blood pressure < 90)▪ Cardiac arrhythmia, heart rate >120 or < 50)▪ Seizure longer than 5 minutes or patient does not regain consciousness between seizures▪ Cyanosis▪ Hypoglycemia with unconsciousness▪ Seizure in pregnant female▪ Seizure with severe headache▪ Seizure associated with trauma	<ul style="list-style-type: none">▪ Open airway with adequate respiratory effort▪ Transient symptoms including seizure with stable vital signs▪ First time or atypical seizure with stable vital signs

PLAN

BLS Care

- **Request paramedics if indicated.**
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Protect patient from injury, remove objects from mouth and upper airway, do not restrain patient during seizure, remove hazardous objects from nearby patient.
- Position patient in position of comfort if alert and airway secure, if not, then use recovery position.
- Loosen restrictive clothing.
- Retain relevant drug containers and notes for transport with patient.

Transportation Decisions

Standard criteria for:

- **Leave At Scene**
Plus: Patient who is recovering from a typical seizure, is neurologically intact with stable vital signs
- **Privately Owned Vehicle (POV)**
Plus: Patient who is recovering from a typical seizure, is neurologically intact with stable vital signs.
- **BLS Aid Car/Private Ambulance**
- **ALS**

ALTERED LEVEL OF CONSCIOUSNESS – Plan/Destination Decisions

Destination Decisions

Standard criteria for:

- **Self-Care**

Plus: Typical seizure, neurologically intact, patient wants to stay home

Plus: Syncope in a nonpregnant young person, normal vital signs, no complaints

Plus: Patient who is recovering from a typical seizure, is neurologically intact with stable vital signs.

- **Clinic Or Doctor's Office**

Plus: Typical seizure, neurologically intact, physician requests visit

- **Hospital Emergency Room**

Except: First or atypical seizure

Except: All overdoses

Except: Syncope of unknown or cardiac etiology

Behavioral Emergencies**DESCRIPTION**

A psychiatric emergency is a situation that includes an acute disturbance in thought, behavior, mood, or social relationship, which requires immediate intervention as requested by the patient, family or housemate. Often, these patients present a risk of harm to themselves and/or others. They also may not differentiate between fire, police, and EMS uniforms. This may place EMS personnel in an unsafe environment.

COMMON COMPLAINTS

A patient suffering from a psychiatric emergency will often experience symptoms of anxiety, depression, aggression, personality changes, delusions, paranoia, mania, suicidal thoughts, and/or hallucinations. Physical symptoms may be caused by these disorders.

SUBJECTIVE KEYS

- Suicidal or homicidal thoughts or actions
- Physical harm to themselves or others
- Recent change in behavior or thinking
- Co-morbidity, drugs, alcohol
- Past psychiatric history, prior diagnoses, medications
- Does patient have an outpatient mental-health treatment provider
- Medical illness with abnormal behavior

OBJECTIVE KEYS

- Pupillary response
- Vital signs
- Mental-status Exam
 - * General description
 - * Mood and effect
 - * Speech
 - * Perceptual disturbances
 - * Thought
 - * Sensorium and cognition
 - * Impulse control
 - * Judgment and insight
 - * Reliability

BEHAVIORAL EMERGENCIES – Assessment

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Decreased level of consciousness▪ Patient needs chemical restraint▪ Abnormal behavior with unstable vitals▪ Abnormal behavior with serious co-morbidity (e.g. drug and alcohol OD)	<ul style="list-style-type: none">▪ Abnormal behavior with stable vital signs

PLAN

BLS Care

- **Request paramedics if indicated.**
- Secure safety of personnel and patient.
- Provide support, reassurance to patient.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Wound or trauma care if indicated.
- Call police if necessary (if patient refuses transport but EMTs / FRs feel patient needs further evaluation).
- Use restraints when warranted.
- Monitor patient behavior and physiological changes, do not leave patient alone, look or turn away from the patient.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
 - Plus:** EMT feels confident that patient is responsible for self-care, and that another responsible party is present, capable and confident
 - Plus:** EMTs believes patient will not try to harm self or others after they leave the scene
- **Privately Owned Vehicle (POV)**
 - Plus:** EMT feels confident that patient is responsible for POV transport, and that another responsible party is present, capable and confident
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
 - Plus:** EMTs believes patient will not try to harm self or others after they leave the scene
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**

Pediatric: Fever & Infection**DESCRIPTION**

Fever, respiratory distress and seizures are the most common dispatch criteria for medical patients under age 12. These complaints are usually due to self-limited viral illnesses in the very young that begin with symptoms of a cold, flu, or upper-respiratory infection. Temperature elevations often produce seizures in these patients. Infrequently these syndromes complicate chronic illnesses, such as asthma or congenital abnormalities.

COMMON COMPLAINTS

Cough, breathing difficulty, fever and seizure are the most frequent symptoms in the pediatric patients seen by EMTs.

SUBJECTIVE KEYS**Factors in child's history indicating "red flags":**

- History of prior intensive-care unit admissions, or intubations during an asthma attack
- Rapid appearance of rash (petechia)
- Repeat emergency room visits or hospital admissions over the past year
- Use of more than one metered-dose inhaler (MDI) canister over the past month
- Worsening symptoms, despite home treatment with a nebulizer, MDI, or oral steroids
- Co-morbidity – Very young (less than 2 months), history of prematurity, chronic lung disease, congenital heart disease or immune deficiency.

OBJECTIVE KEYS**Factors in exam indicating "red flags":**

- Altered level of consciousness
- Child prefers a seated tripod position, or refuses to lie down
- Poor appearance (lethargy, persistent irritability, decreased interaction)
- Can't speak in full sentences
- Age specific tachypnea
- Age specific tachycardia
- Retractions
- Nasal flaring
- Expiratory grunting
- Apnea
- A "quiet" chest

PEDIATRIC: FEVER & INFECTION – Assessment

ASSESSMENT

ALS Indicators	BLS Indicators
Seizure <ul style="list-style-type: none">▪ Respiratory distress or airway compromise▪ Recurrent seizure▪ Prolonged, depressed level of consciousness Fever/Infection <ul style="list-style-type: none">▪ Red flags by history▪ Red flags by exam	Seizure <ul style="list-style-type: none">▪ Recurrent /febrile seizure Fever/Infection <ul style="list-style-type: none">▪ Signs, symptoms present with no red flags

PLAN

BLS Care

- **Request paramedics if indicated.**
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Monitor vital signs.
- Position of comfort.
- In seizure patient, place child on side to protect airway.
- May assist caregiver with medication to reduce temperature i.e. Tylenol, not aspirin.
- If febrile, attempt to reduce patient's temperature.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Plus: Patient with a history of febrile seizure, who is recovering from febrile seizure, is neurologically intact with stable vital signs, and competent caregiver requests home care.
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Home Care**
Plus: Patient with a history of febrile seizure, who is recovering from febrile seizure, is neurologically intact with stable vital signs, and competent caregiver requests home care.
- **Clinic Or Doctor's Office**
Except: First-time febrile seizure
- **Hospital Emergency Room**
Except: First-time febrile seizure

Abdominal Complaints

DESCRIPTION

Abdominal pain is the most common abdominal symptom. Pain may be associated with blood loss (e.g. duodenal ulcer and rupture of abdominal aortic aneurysm); intestinal obstruction (e.g. strangulated inguinal hernia and tumor); or infection (e.g. appendicitis or diverticulitis). Abdominal complaints may range from simple conditions to catastrophic (e.g. intestinal flu to ruptured aneurysm).

COMMON COMPLAINTS

Dispatch for bellyache, stomachache, or “sick to my stomach” are common.

SUBJECTIVE KEYS

- Abdominal pain (character, location, relation to bodily function)
- Vomiting (duration, intensity, content, blood)
- Stools (quantity, character, blood, color)
- Co-morbidity conditions

OBJECTIVE KEYS

- Vital signs
- Abdominal tenderness
- Abdominal masses
- Observations of vomitus and stool

Acute Abdomen Problems by Location	
Epigastric Pain	
<ul style="list-style-type: none"> ▪ Gastritis ▪ Esophagitis ▪ Pancreatitis 	<ul style="list-style-type: none"> ▪ Cholecystitis ▪ Acute MI
<i>Right Upper Quadrant (RUQ)</i> <ul style="list-style-type: none"> ▪ Cholecystitis ▪ Hepatitis ▪ Perforated ulcer ▪ Renal pain right side 	<i>Left Upper Quadrant (LUQ)</i> <ul style="list-style-type: none"> ▪ Pancreatitis ▪ Gastritis ▪ Renal pain left side ▪ Splenic rupture/Infarct
<i>Right Lower Quadrant (RLQ)</i> <ul style="list-style-type: none"> ▪ Appendicitis ▪ Abdominal aortic aneurysm (AAA) ▪ Ectopic pregnancy ▪ Ovarian cyst ▪ Pelvic inflammatory disease (PID) ▪ Kidney stone ▪ Strangulated hernia ▪ Intestinal obstruction ▪ Generalized peritonitis 	<i>Left Lower Quadrant (LLQ)</i> <ul style="list-style-type: none"> ▪ Diverticulitis ▪ Abdominal aortic aneurysm (AAA) ▪ Ectopic pregnancy ▪ Ovarian cyst ▪ Pelvic inflammatory disease (PID) ▪ Kidney stone ▪ Hernia ▪ Intestinal obstruction ▪ Generalized peritonitis

ABDOMINAL COMPLAINTS – Assessment

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Hypotension (BP < 90)▪ Positive postural changes▪ Cutaneous mottling▪ Evidence of active bleeding▪ Severe unremitting pain▪ Missing femoral pulse	<ul style="list-style-type: none">▪ Abdominal complaint with stable cardiac and respiratory functions▪ Stable vital signs

PLAN

BLS Care

- **Request paramedics if indicated.**
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Position of comfort (Trendelenburg if hypotensive).
- Prepare to suction patient if vomiting, estimate volume and describe character of vomitus.
- Reassure patient.
- Monitor vital signs every 5 minutes.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**

Environmental Emergencies

Heat-Related Illness (Heat Stroke, Heat Exhaustion, Heat Cramps)

DESCRIPTION

Heat-related illness occurs when the body is overwhelmed by heat, and/or cooling mechanisms become ineffective. Heat cramps, heat exhaustion, and heat stroke are progressive phases of heat illness.

COMMON COMPLAINTS

Patients suffering from heat-related illness will have been exposed to a hot environment and may complain of muscle cramps, weakness, dizziness, nausea and/or vomiting, and in severe cases, confusion and disorientation.

SUBJECTIVE KEYS

<ul style="list-style-type: none"> ▪ Chief complaint exposed to heat with flu-like symptoms (anorexia, headache) ▪ Weakness or exhaustion ▪ Dizziness or faintness ▪ Muscular cramps 	<ul style="list-style-type: none"> ▪ Nausea ▪ Syncope episode ▪ Confusion
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NOTE: Populations at higher risk for heat stroke include the elderly, athletes, and people who do strenuous work in hot, humid environments.

OBJECTIVE KEYS

- Altered level of consciousness, confusion, delirium, bizarre behavior, seizures, coma
- Rapid, deep respirations
- Heart rate > 120
- Hypotension or postural hypotension (systolic blood pressure < 90)
- Skin (profuse sweating or may be hot, dry and not sweating)
- Temperature elevation (measurement if available)
- Vomiting observed
- Positive postural changes

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none"> ▪ Decreased/altered level of consciousness ▪ Heart rate > 120 ▪ Hypotension systolic blood pressure < 90 ▪ Positive postural changes 	<ul style="list-style-type: none"> ▪ Heat related cramps ▪ Minor to moderate heat-related complaint with stable vital signs

ENVIRONMENTAL EMERGENCIES – Heat Related/Plan

PLAN

BLS Care

- **Request paramedics if indicated.**
- Remove patient from the hot environment and place patient in a cool environment (back of air-conditioned ambulance with air conditioner running on high).
- Reassure and cool patient .
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
- Loosen or remove clothing.
- Apply cool packs to neck, groin and armpits for the heat-stroke patient.
- Keep skin wet by applying cool water by sponge or wet towels.
- Fan aggressively.
- Place patient in Trendelenburg position.
- If patient is responsive and not nauseated, have patient drink water.
- If the patient is vomiting, place in recovery position.
- Monitor patient's vital signs and temperature.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Destinations

Standard criteria for:

- **Self-Care**
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**

Cold-Related Injuries

DESCRIPTION

There are two main categories of illness caused by exposure to a cold environment. Hypothermia occurs when the body's temperature cools below 95°F (35°C), caused by either loss of body heat or decreased heat production. Frostbite, the destruction of tissue due to freezing; can be superficial or deep.

COMMON COMPLAINTS

A person suffering from hypothermia will complain of cold, shivering, and, in later stages, impaired speech and judgment and loss of muscle coordination. Symptoms of frostbite include numbness, pain and tingling of the affected area; white/waxy appearance, swelling and blisters are also common.

ENVIRONMENTAL EMERGENCIES – Cold Related/Subjective Keys

SUBJECTIVE KEYS

- Environment conditions of cold exposure
- Complaining of feeling cold and/or numb

OBJECTIVE KEYS

- Stiff or rigid posture
- Impaired speech, orientation
- Loss of muscle coordination
- Local injury with clear demarcation
- Early or superficial injury
- CNS abnormality: altered level of consciousness, immobility, impaired speech, fixed, dilated or slowly responding pupils
- Shivering with temperature at 90°- 95°, shivering stops with temperature less than 90°
- Hypothermia (temperature < 95°)
- Heart rate < 50
- Hypotension (systolic blood pressure < 90)
- Skin cool to cold and dry
- Local tissue with appearance of frostbite and loss of normal sensation and function
- Cardiac arrest

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Decreased/altered level of consciousness▪ Temperature < 95° F (35°C)▪ Significant co-morbidities, e.g. age, illness, circumstances, trauma, alcohol, drugs▪ Cardiac arrest▪ Hypotension (systolic blood pressure < 90)	<ul style="list-style-type: none">▪ Cold exposure, temperature > 95°, normal vital signs and no abnormal level of consciousness▪ Frostbite with temperature > 95°, normal vital signs and no abnormal level of consciousness

PLAN

BLS Care (Hypothermia)

- **Request paramedics if indicated**
- Remove patient from the cold environment and protect the patient from further heat loss.
- Provide supplemental oxygen and/or ventilatory assistance as necessary.
 - * Provide high flow oxygen via pocket facemask or BVM to warm air.
- Remove wet clothing.
- Position of comfort. If obtunded or comatose, place in recovery position.
- Warm the patient.
- Warm the aid car.
- Monitor patient's vital signs, use ECG monitor if authorized, repeat temperature measurements.

ENVIRONMENTAL EMERGENCIES – Cold-Related/Plan – Hypothermic Cardiac Arrest

BLS Care (Hypothermic Cardiac Arrest Or Profound Bradycardia)

- If no pulse is detected after one minute, begin CPR and apply AED. If breathing, assume there is cerebral perfusion.
- If AED “Shock Indicated”, follow directions 3 times only, continue CPR unless pulse returns.
- If pulse is present, withhold CPR regardless of rate.

BLS Care (Frostbite)

- Protect cold-injured part from further injury.
- Remove any constricting or wet clothing or shoes and replacing with a dry bulky dressing.
- Splint the injury and do not let them walk or use affected extremity.
- Remove constricting jewelry, e.g. rings, watchbands.
- Do not rub or massage injured tissue.
- Transport to an emergency room.

Note: Do not re-warm frozen tissue unless transport time will exceed 2 hours and it is certain that the thawed tissue will not refreeze. Obtain medical direction prior to initiating re-warming. Re-warming should be done with 100°F - 105°F water. Do not use dry heat, it heats unevenly and may burn frozen tissue. Stop re-warming when the tissue turns red-purple and becomes pliable.

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Plus: Patient’s temperature > 95°F
- **Privately Owned Vehicle (POV)**
Plus: Patient’s temperature > 95°F
- **BLS Aid Car/Private Ambulance**
Plus: Patient’s temperature > 95°F
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
Plus: Patient’s temperature > 95°F
- **Clinic Or Doctor’s Office**
Plus: Patient’s temperature > 95°F
- **Hospital Emergency Room**

Water Related Emergencies

DESCRIPTION

Water-related emergencies are common in the King County area, due to the popularity and availability of water recreational activities. The emergencies include drowning and near

drowning, as well as illnesses related to SCUBA diving, such as decompression illness, barotrauma, and air embolism.

ENVIRONMENTAL EMERGENCIES – Water-Related/Common Complaints

COMMON COMPLAINTS

Drowning or near drowning results in a lack of oxygen to the brain and other vital organs. Common complaints are that a person was reported to have been submerged. Spinal and/or other skeletal injuries are also often seen in many water-related accidents.

SUBJECTIVE KEYS

<ul style="list-style-type: none"> ▪ Significant chief complaint (drowning or near-drowning): <ul style="list-style-type: none"> * depth of water * water contamination * length of submersion * temperature of the water * fresh or salt water ▪ Evaluation for other co-morbid factors, including spinal injury 	<p>History for diving emergencies:</p> <ul style="list-style-type: none"> ▪ Length of time under water ▪ Depth of dive ▪ Rate of ascent ▪ Problems encountered while diving ▪ Significant medical history ▪ Current medications ▪ Physical complaints (pain in lungs, sinus, middle ear, teeth, face, joints) ▪ Significant change in vision, speech, mobility ▪ Number of dives in past 24 hours
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OBJECTIVE KEYS

<ul style="list-style-type: none"> ▪ Vitals (measure temperature if possible) ▪ CNS function: Level of consciousness, movement, pupils ▪ Respiratory status: ventilation, oxygenation ▪ Skin (cool or cold and wet) ▪ VF or profound bradycardia 	<p>Significant objective findings:</p> <ul style="list-style-type: none"> ▪ Mottled skin ▪ Altered level of consciousness, paralysis, numbness ▪ Bleeding from nose, mouth or lung ▪ Dyspnea
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ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none"> ▪ Any underwater rescue ▪ Altered level of consciousness ▪ Hypotension (systolic < 90) ▪ Temperature of less than 95° ▪ Significant co-morbidity, e.g. injury, intoxication ▪ Cardiac or respiratory arrest ▪ Symptoms or findings of scuba related emergency 	<ul style="list-style-type: none"> ▪ Water related accident including aspiration of water, injury in diving or swimming with normal CNS function and vital signs

ENVIRONMENTAL EMERGENCIES – Water Related/Plan

PLAN

BLS Care

- **Request paramedics if indicated.**
 - Remove the victim from the water; do not become a victim.
 - In-line immobilization during removal from water with a backboard if spine injury is suspected or patient is unresponsive.
 - If there is no suspected spinal injury, place patient on left side.
 - Provide supplemental oxygen and/or ventilatory assistance as necessary.
 - Prepare suction, expect vomiting.
 - Follow resuscitation protocols if cardiac or pulmonary arrest.
 - Warm Aid Car.
 - Monitor vital signs.
-

Care For Scuba Diving Accidents

- **Request paramedics**
 - High flow oxygen/100% by mask
 - Position patient on left side with head and chest lower than feet to prevent air bubbles from moving to lungs, heart and brain (heart down, head down).
 - Administer high-flow oxygen by mask.
-

Transport Decisions

Standard criteria for:

- **Leave At Scene**
Except: Water-related emergencies requiring transportation
- **Privately Owned Vehicle (POV)**
Except: Water-related emergencies requiring transportation
- **BLS Aid Car/Private Ambulance**
- **ALS**

ENVIRONMENTAL EMERGENCIES – Scuba-Diving Accidents/Destination Decisions

Destination Decisions

Standard criteria for:

- **Self-Care**
Except: All water-related emergencies require physician evaluation in the emergency room
- **Clinic Or Doctor's Office**
Except: All water-related emergencies require physician evaluation in the emergency room
- **Hospital Emergency Room**

ENVIRONMENTAL EMERGENCIES – Stings And Bites

Stings And Bites

DESCRIPTION

Bites and stings are inflicted by insects and animals.

COMMON COMPLAINTS

In addition to the bite, complications are usually local reaction to toxins and venoms, but complications of infection and anaphylaxis may occur.

SUBJECTIVE KEYS

- History of allergy/anaphylaxis to bites
- Pain
- Weakness and dizziness
- Chills or fever
- Nausea and vomiting
- Stingers

OBJECTIVE KEYS

- Bite or sting site size, appearance
- Signs of anaphylaxis
- Redness and/or swelling

ASSESSMENT

ALS Indicators	BLS Indicators
<ul style="list-style-type: none">▪ Anaphylaxis▪ Unstable vital signs▪ Use of EpiPen	<ul style="list-style-type: none">▪ Usual bite or sting with local reaction▪ Stable vital signs▪ No anaphylaxis

PLAN

BLS Care

- **Request paramedics if indicated.**
- Remove stinger by scraping away from puncture site.
- Reassure patient.
- Oxygen as needed.
- EpiPen for anaphylaxis.

ENVIRONMENTAL EMERGENCIES – Stings And Bites/Transport Decisions

Transport Decisions

Standard criteria for:

- **Leave At Scene**
- **Privately Owned Vehicle (POV)**
- **BLS Aid Car/Private Ambulance**
- **ALS**

Destination Decisions

Standard criteria for:

- **Self-Care**
- **Clinic Or Doctor's Office**
- **Hospital Emergency Room**

Specific EMT Treatment Skills

Purpose Of Treatment Skills Section

This section considers the skills that must be a part of every EMT's repertoire. Although described here in words, these manual techniques are best learned by understanding the reasons behind the skills, then by watching and practicing the techniques. Even after the skills have been learned, frequent review and evaluation is essential.

An EMT treatment skill is defined as a BLS medical action that stabilizes and/or improves the patient's condition.

Resuscitation

Resuscitation encompasses both CPR and defibrillation. The goal is to provide effective CPR and rapid defibrillation safely.

CPR

The CPR skills standards are the current American Heart Association Standards for Basic Life Support.

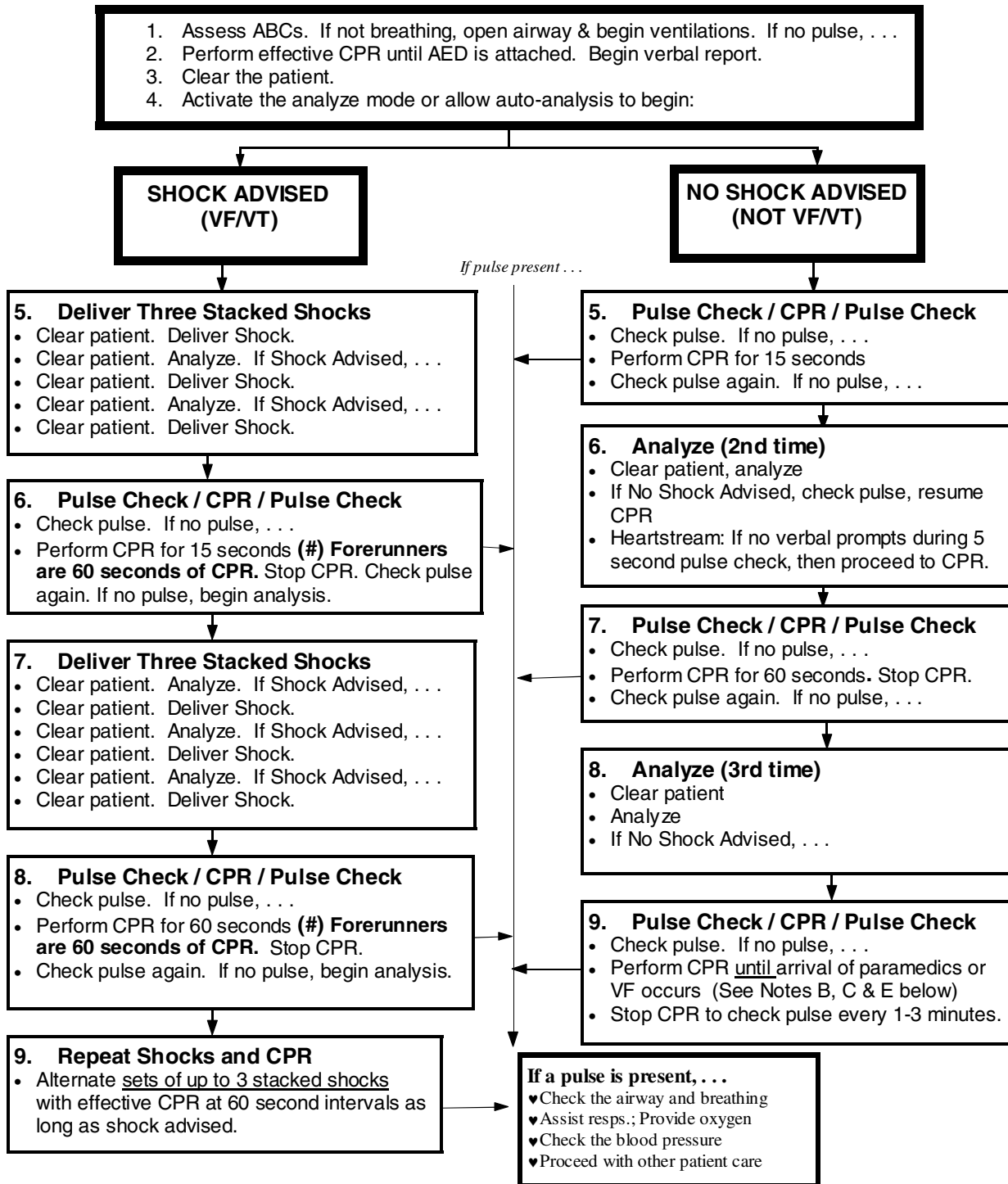
DEFIBRILLATION

Standing Orders for Cardiac Resuscitation by Emergency Medical Technicians

- SCOPE:** Effective January 1, 2002, these orders replace all previous standing orders. These Standing Orders direct the use of both automated and manual external defibrillators operated by certified King County Emergency Medical Technicians (EMT) and First Responders (FR).
- PURPOSE:** The purpose of these orders is to direct the prompt resuscitation of patients who have confirmed circulatory arrest due to ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT).
- AUTHORIZATION:** In the event of a full cardiac arrest in King County, Washington, the EMT / FR is authorized to perform the following:
- I. Immediately upon arrival, verify respiratory and circulatory arrest by the absence of: consciousness, normal respirations, and a carotid pulse.
 - II. Initiate CPR and defibrillation protocols.
 - III. General **DEFIBRILLATION PROTOCOL:** King County EMTs / FRs are authorized to deliver electric shocks with a defibrillator to patients whose ECG rhythm is ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT). This should be done as quickly as possible, with a minimum interruption of CPR. Exact sequencing details may vary as long as the following overall goals are realized:
 - A. VF is shocked repeatedly and as rapidly as possible.
 - B. Effective CPR is performed and interrupted only for a minimum time.
 - C. Overall patient care and safety are never neglected.
 - IV. Assessment: assess/analyze the ECG rhythm for the presence of Ventricular Fibrillation (VF) or Pulseless Ventricular Tachycardia (VT):
 - A. Turn the defibrillator power on and begin a verbal report.
 - B. Immediately attach the defib pads with cables to the patient's chest.
 - C. Clear patient to analyze/assess the cardiac rhythm.

RESUSCITATION – Automated External Defibrillation

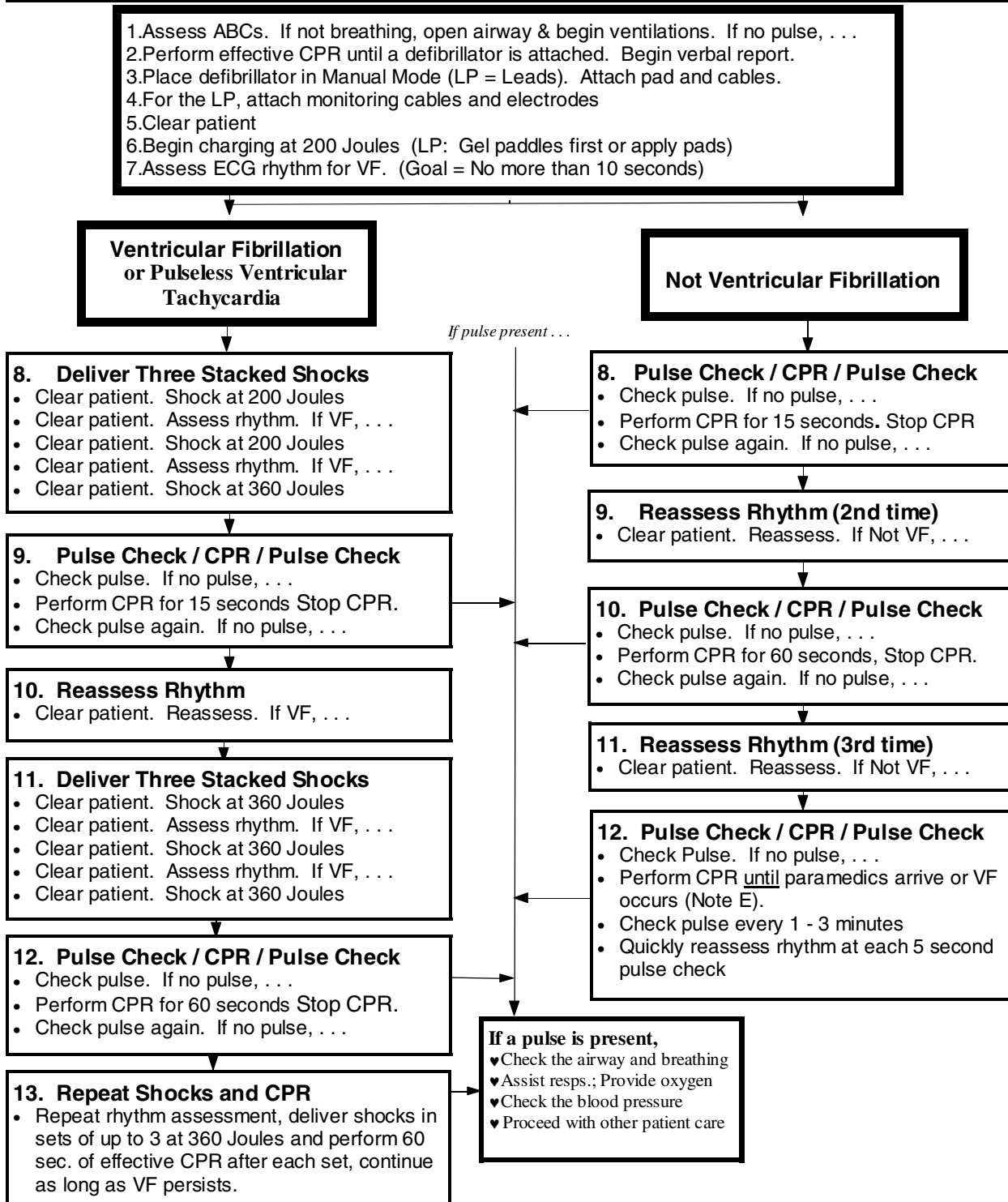
ALGORITHM FOR RESUSCITATION WITH AUTOMATED EXTERNAL DEFIBRILLATION



Notes:

- If Shock Advised at any time, return to the Shock Advised branch of the algorithm.
- If Shock Advised anytime, continue analyzing pulseless patient after every few minutes of CPR even after 3 "No Shock Advised".
- If never in VF and three consecutive "No Shock Advised" prompts received, continue effective CPR until paramedics arrive.
- From the beginning of the resuscitation, the defib-tech must take charge of the scene and patient care.
- The "Check Patient" prompt indicates the patient may now be in a shockable rhythm. If the last analysis was a No Shock Advised, the defib tech may assume there is a change in the patient's rhythm, stop CPR, check pulse, clear patient and begin analysis.

ALGORITHM FOR RESUSCITATION WITH MANUAL EXTERNAL DEFIBRILLATION



Notes:

- A. If VF recurs at any time or is detected in any other lead, return to the VF branch of the algorithm and treat with shocks..
- B. From the beginning of the resuscitation, the defib tech must take charge of the scene and patient care.
- C. If rhythm assessment indicates the possibility of VTach, then continue CPR while considering switching to the AED mode for analysis.
- D. If never in VF and three consecutive "Not VF" assessments are performed, continue CPR until paramedics arrive.
- E. LP5: Verify Asystole. Check lead connections to patient and defib. Verify lead selector is in the Lead II position. Check for possible VF by assessing the rhythm for 5 seconds in Lead I and/or 5 seconds in Lead III.
- F. Time and equipment permitting, record a paper strip of the ECG rhythm during assessment.

RESUSCITATION – Clinical Guidelines

CLINICAL GUIDELINES

- 1. Non-Cardiac Arrest Patient:** Defibrillator units may be used to monitor selected BLS patients when the following conditions are met: 1) Attending EMTs have been trained for use of **manual defibrillators**, or 2) when the BLS provider has met the criteria to provide **ECG monitoring**. The criteria for training in these procedures are outlined in the training requirements.
- 2. Carotid Pulse Check:** In an unconscious, unresponsive patient, the carotid pulse should be used to confirm cardiac arrest. Pulse checks should not exceed 5 seconds. Absence of a femoral pulse does not confirm cardiac arrest. If hypothermia is suspected, then perform checks for one minute.
- 3. Communication:** Verbal communication on the tape recorder should be ongoing throughout the event. After the defibrillator has been turned on, the first recording should contain 1) Date and time, 2) Identity of the speaker, 3) Estimated time of cardiac arrest, 4) Witnessed or un-witnessed arrest, 5) Whether or not citizen CPR was being performed, 6) Description of treatment as it occurs. 7) Announce the arrival of paramedics. Allow the cassette tape recorder to record until patient is delivered to the ER or the AED is removed by direction of ALS providers. Defibrillation clocks should be synchronized with dispatch time weekly.
- 4. No Prescribed Period Of Initial CPR:** Upon arrival at the scene and verification of cardiac arrest, the defibrillation EMT / FR shall proceed immediately with the resuscitation protocols outlined in these standing orders (after properly positioning the patient and arranging the working environment, if necessary). These efforts should continue until arrival of paramedics or compelling circumstances to stop are identified. These circumstances are defined in the end-of-life issues section of the Patient Care Guidelines.
- 5. No Excessive Interruptions of CPR:** If delays in CPR of 5 seconds or more are encountered (e.g. vomiting, safety issue, etc.), resume CPR as soon as possible until the problem is resolved. Once the issue is resolved, reassess the patient and continue with the resuscitation standing orders. Delays in CPR of more than 5 seconds are permitted only during rhythm assessment/analysis and shock delivery. In particular, do not delay CPR while checking to see if a rhythm is producing a pulse. **If no pulse is found in 5 seconds (unconscious patient), resume CPR immediately.**
- 6. Blood Pressure Less Than 60 mm Hg:** If the patient's systolic blood pressure after resuscitation is less than 60 mm Hg, and the patient remains unconscious, continue CPR. Do not stop chest compressions just because the heart has started to beat. The heart beat may be inadequate to perfuse the patient but still may provide a pulse. Do not depend on touch to measure the blood pressure, use a blood pressure cuff.
- 7. Rapid Defibrillation:** The first shock should be delivered within 60 seconds of the provider's arrival at the patient's side, timed from pulse check. This time is typically started when the patient is determined to be pulseless. Each EMT has a specific role in the resuscitation of the cardiac arrest patient. **For the EMT with the AED:** defibrillation is the highest priority in a cardiac arrest. It takes precedence over basic CPR, ventilations, suctioning, history taking, verbal updates or problems with the tape cassette or ECG paper. **For the EMT doing CPR:** maintaining the airway, providing effective ventilations and performing effective CPR are the highest priorities.

- 8. Documentation Submittal:** Cardiac Arrest Surveillance System (CASS) data is required from all cardiac arrest patients in which CPR is started. The reporting EMT should email defib@metrokc.gov immediately to make the initial notification of the cardiac arrest event. The cassette tape, electronic transmission or other defibrillation record and Medical Incident Report Form must be submitted to King County EMS within 4 days of the cardiac event. If defibrillation electronic records are not available then paper strip recordings should be submitted for all cardiac arrests.

B. Special Patient and Pediatric Guidelines

- 1. Pediatric Arrest:** For children less than 8 years of age, verify cardiac arrest and begin effective CPR and await paramedics' arrival. **Do not analyze or shock a cardiac arrest patient who is less than 8 years of age.** For children over 8 years of age, follow adult defibrillation protocols.
- 2. Hypothermic Arrest:** The hypothermic heart in VF (<85 °F core temp.) does not respond to defibrillation. Because field body core temperatures are not available, defibrillation should not be withheld under the assumption that the heart is hypothermic. Analyze/assess the rhythm and, if the rhythm is VF, deliver up to 3 shocks in presumed hypothermic cardiac arrest. If VF persists after 3 shocks, stop defibrillation attempts. Resume CPR, await paramedics' arrival and initiate re-warming. Pulse checks should be of one-minute durations.
- 3. Traumatic Arrest:** Defibrillation is ineffective in the true traumatic cardiac arrest due to exsanguination. If major blood loss/major trauma is obvious, initiate basic life support. Rhythm assessment and defibrillation have low priority in cardiac arrest due to trauma. If major blood loss/major trauma is not obvious, approach the patient as usual and initiate defibrillation protocols.
- 4. Automatic Internal (Implanted) Cardiac-Defibrillators (AICD):** These devices provide a limited number of shocks, in persistent VF, 5 shocks would exhaust the battery and would have been delivered in about 150 seconds. The patient may still be in VF/VT after the AICD has exhausted its programmed therapies or its battery. Even if the AICD discharges while CPR and defibrillation is ongoing the energy levels are insufficient to harm the BLS rescuers, (Approximately 36 joules at the heart level.) **TREAT THE PATIENT AS ANY OTHER CARDIAC ARREST.**

C. Safety In Defibrillation

- 1.** Everyone, including the EMT, must be clear of the patient when delivering the shock. The defibrillator operator must visually and verbally clear the patient prior to the shock. Clearing of the patient is also required prior to rhythm analysis/assessment.
- 2.** Ensure defib pads/paddles are in firm contact with the patient's skin. If necessary, shave excessive hair. If the patient is wet/sweaty, dry the chest before applying pads or defibrillating. Remove any creams, patches and/or ointments from the chest (e.g. nitro patch, paste). Do not take the time to identify which type of cream/ointment/patch is on the patient.
- 3.** If it is necessary to deliver a shock while transporting a patient, proceed in the following manner:
 - a) Bring the vehicle to a complete stop. Assure there is no motion affecting rhythm analysis/assessment.
 - b) Assure the safety of all personnel. Defibrillation hazards increase in an area of limited space or when metal objects (e.g. stretcher) are close by.

RESUSCITATION – Airway Obstruction

AIRWAY OBSTRUCTION

Management of airway obstruction should follow the current American Heart Association standards for Basic Life Support.

Airway Adjuncts And Suctioning

OROPHARYNGEAL AIRWAY

The oropharyngeal airway rests in the patient's oropharynx, lifting the tongue away from the back of the throat and preventing it from occluding the airway. This airway is used only on unconscious patients with no gag reflex. Use of an airway on a patient with a gag reflex may cause retching, vomiting, or spasm of the vocal cords.

To insert an oropharyngeal airway:

- Choose correct size by measuring from the corner of the mouth to the ear lobe, or from the chin to the angle of the jaw.
- Open the patient's mouth with the crossed-finger or other technique (thumb and fingers on upper and lower teeth, twist to open).
- Insert the airway with the tip facing the roof of the patient's mouth. It may be necessary to grasp the patient's tongue to prevent it from being pushed back into the mouth as the airway is inserted.
- When the airway is halfway in the mouth, rotate the airway 180 degrees and insert until the flange rests on the lips or teeth.
- In pediatric patients (ages 3-12), insert the airway right side up.
- If the patient begins to gag, remove the airway at once. Keeping an airway in the mouth of a patient with an intact gag reflex may worsen the situation by causing vomiting.
- If ventilation is difficult after inserting the airway, reassess to ensure that the tongue has not been pushed downward by the oropharyngeal airway.

If ventilation via BVM is easily accomplished without the use of oropharyngeal airway, then it is not necessary to insert one.

SUCTIONING

The Yankauer suction tip is preferred for most suctioning. If the holes on the Yankauer get plugged repeatedly, the tip can be removed and the larger bore tubing used for suctioning.

To suction with the Yankauer tip:

- Measure approximately from the corner of the mouth to the ear lobe.
- Insert the suction catheter this approximate depth into the pharynx.
- Do not suction while inserting; suction only after the Yankauer is in place. (Other suction devices work differently. For example, some require a hole to be plugged for a vacuum to be created. Become familiar with the devices on your rigs.)
- Suction for no more than 15 seconds at a time. (In rare cases, copious vomiting that threatens the airway may require a longer period of suctioning.)
- Oxygenate the patient well after suctioning, either passively (nasal cannula, mask) or mechanically (hyperventilating with BVM).

OXYGEN DELIVERY SYSTEMS

Oxygen Delivery

The amount of oxygen given and the method of administration depend on many factors, including the patient's medical history and the type of problem.

Flow	Volume	Device
Low flow	2 - 6 liters/minute	Nasal cannula
High flow	10 - 25 liters/minute	Partial non-rebreather mask
High flow, with ventilation	15-25 liters/minute	Bag-valve mask with reservoir for 100% oxygen

CONSCIOUS PATIENT IN NO RESPIRATORY DISTRESS

Begin with 2 liters per minute nasal cannula as history is obtained. If no contraindications, may increase to 4 liters per minute. Some patients (for example, a person with a lacerated finger) will not require oxygen at all, but it is always better to err on the side of providing oxygen when it doubt.

CONSCIOUS PATIENT IN RESPIRATORY DISTRESS

Increase oxygen delivery according to problem, from nasal cannula to partial non-rebreather mask. Use the patient's respiratory rate, effort, and exchange; ease of speaking; skin color; and level of agitation or calmness as a guide. When using a partial non-rebreather, remember to use a liter flow that is high enough to keep the bag fully inflated.

CONSCIOUS PATIENT IN SEVERE RESPIRATORY DISTRESS

Some patients in severe respiratory distress may need assistance to breathe, as provided by a bag-valve mask with 100% oxygen. Such patients may present with inability to speak, extreme exhaustion, minimal air movement, cyanosis, agitation, sleepiness, or a decreasing LOC. Examples include patients with chest or throat injury, airway obstruction, CHF, COPD, asthma, near drowning. To assist respirations in a conscious patient, first explain the treatment to the patient then gently place the mask over the patient's nose and mouth, and ventilate with the bag. Observe the patient's chest and abdomen and try to time the assisted breaths to coincide with the patient's, or coach the patient to breathe with bag compressions.

CONSCIOUS PATIENT WITH COPD

The physiology of some patients with COPD differs from that of normal people in that their primary stimulus to breathe comes from a decrease of oxygen in the blood rather than an increase of carbon dioxide. Providing these patients with high concentrations of oxygen could theoretically depress their respiratory drive. Because of this, it may be advisable to provide patients with a history of COPD with lower levels of oxygen, if they are not in severe respiratory distress. Two liters per minute by nasal cannula is usually sufficient in this situation. If a patient with COPD presents in respiratory distress that does not improve with low levels of oxygen, increase the amount of oxygen. **A patient should not be deprived of oxygen regardless of COPD history.**

A patient with COPD whose respiratory drive is diminished due to excessive oxygen may present with increasing lethargy, confusion, and decreasing respiratory rate and effort. If this occurs, be prepared to assist ventilations.

OXYGEN DELIVERY SYSTEMS – Unconscious Patient With Sufficient Respirations

UNCONSCIOUS PATIENT WITH SUFFICIENT RESPIRATORY EFFORT

Oxygen delivery may range from low-flow with a nasal cannula to high-flow with a non-rebreather mask. The patient's vital signs (especially respiratory rate and effort), color, and type of problem should determine oxygen flow level. Evaluate respiratory rate and effort constantly, and do not hesitate to assist respirations if necessary.

UNCONSCIOUS PATIENT WITH NO RESPIRATORY EFFORT OR INSUFFICIENT RESPIRATORY EFFORT

Ventilate patient or assist ventilations with a bag-valve mask and 100% oxygen. If the patient resists the attempts to ventilate, try to time breaths with the patient's, compress the bag as the patient inhales.

POSITIVE PRESSURE VENTILATIONS WITH BVM

Positive Pressure Ventilations With A Bag Valve Mask (BVM)

Ventilating a patient with a bag-valve mask is a vital EMT skill. Successful ventilation depends upon making a good seal between the mask and the patient's face, and maintaining an open airway.

To ventilate a patient with a bag-valve mask:

- Choose the correct size for the patient.
- Place the apex, or top of the triangle, over the bridge of the nose (between the eyebrows).
- Settle the base of the mask between the patient's lower lip and the prominence of the chin.

TWO EMT TECHNIQUE

Two EMTs can ventilate a patient more effectively than one. When two EMTs are available to ventilate, the following technique should be used:

The first EMT secures the mask to the patient's face. The EMT puts one hand on either side of the patient's face. The thumbs press down on the mask, while the fingers grasp the lower jaw and pull upward. By encircling the mask in this way, the EMT can feel whether air is escaping and can adjust pressure on the mask and face accordingly.

The second EMT squeezes the bag, with both hands if necessary, depending on the size of the patient and the EMT's hands.

ONE EMT TECHNIQUE

If only one EMT is available, the Face and Thigh Squeeze (FATS) technique is recommended.

- Kneel with one knee on either side of the patient's head.
- Hold the mask firmly in position by placing the heel of the hand on top of the mask, extending the fingers and thumb forward, and grasping the lower jaw with the middle two or three fingers.
- Open the airway by sitting back on the heels and tilting the head while lifting the chin with the hand on the mask.
- Squeeze the knees to keep the head hyper-extended.
- Squeeze the bag against the thigh with the second hand to ventilate.
- Squeeze the bag slowly. This reduces the risk of gastric insufflation and distention.

ASSISTANCE WITH ADMINISTRATION OF MEDICATIONS

Assistance With Administration Of Medications

STEPS IN ASSISTING WITH ADMINISTRATION OF PRESCRIBED MEDICATIONS:

- Initiate assessment and treatment of the patient as indicated by the signs and symptoms.
- Verify the following: The medication has been prescribed by a physician for the patient, the medication inside the container is the one indicated on the prescription label, and the medication has not passed the expiration date on the prescription label.
- Determine the last time the patient self-administered the medication and the number of doses taken.
- If in doubt, contact an ER doctor or patient's personal physician for medical direction, a brief history and assessment.
- Administer the medication as directed.
- Document the administration of the medication by recording the drug, dose, method of administration, time of administration and name of physician ordering the assistance with medication.
- Five minutes after administration of the medication reassess and document the patient's vital signs and any changes in his or her condition.

ASSISTING WITH NITROGLYCERIN

The patient may be assisted in taking prescribed nitroglycerin (NTG or nitro) if the pain is the same type of pain for which he or she normally takes nitroglycerin (i.e. typical angina) and BP > 100. The EMT can locate the nitro, open the container, and offer a pill to the patient. Do not administer the drug by placing the pill in the patient's mouth. The EMT may help in the same way with nitroglycerin spray. If in doubt, consult with the responding paramedic unit or with the ER physician before assisting with nitro.

The following conditions must be met before assisting with nitro:

- Complaint of pain similar to what they normally experience as angina pectoris or cardiac pain
- Blood pressure > 100 systolic
- Patient takes no more than three doses total (5 minutes apart).
- The prescription expiration date should not have passed.
- Patient must be sitting or lying down before assisting with nitro.
- The patient should not have taken Viagra within the past 12 hours.

ASPIRIN (ASA)

Some patients will request assistance for the administration of Aspirin in association with a severe chest pain episode. Aspirin has been shown to be useful in the early phase of myocardial infarction. If the patient has 80 or 360 mg tablets of Aspirin they may be assisted in the same manner as described for nitroglycerin. The patient should place one Aspirin tablet in his/her mouth, which may be swallowed with a small amount of water.

ASSISTANCE WITH ADMINISTRATION OF MEDS – Metered Dose Inhalers

METERED DOSE INHALERS

Patients with chronic respiratory diseases such as asthma and chronic obstructive pulmonary disease will often have prescriptions for bronchodilator, anticholinergic, and/or steroid inhalers. These medications are contained in pressurized metal cylinders, which deliver a metered dose of medication through a mouthpiece into the patient's mouth, trachea, and lungs. A single dose is usually two or three inhalations, but limits on frequency of dosing and total daily dosing are set by prescription. When the patient experiences increased symptoms of respiratory distress they may often find that an additional dose is useful. The EMT may locate the inhaler and hand it to the patient. The patient should be able to self-administer the medication.

If the patient has already used the medication in excess of their prescription, the EMT should not assist in additional treatment. If the patient is unable to self-administer the medication, the EMT should focus on airway management and oxygenation. This would qualify as an ALS indicator.

SYRUP OF IPECAC

Ipecac is an emetic that irritates the stomach and acts on the vomiting center in the brain. Give it only to poisoned patients who are conscious and able to follow simple commands and who have not taken any drug that may cause unconsciousness. This reduces the chances of aspiration of vomitus into the lungs. Vomitus in the lungs causes serious pneumonia.

Only administer ipecac under direction of Medical Control. Always monitor the patient and maintain the airway after administration. The recommended dosage is 1 teaspoon for a child under 1 year and 2 tablespoons for older children and adults. Give orally, followed by several glasses of warm water, fruit juice, or carbonated soda. Position the patient to prevent aspiration. Ipecac takes up to 15 minutes to act. Save a sample of vomitus if possible.

ACTIVATED CHARCOAL

Activated charcoal works by chemically binding substances that have entered the stomach. This prevents the stomach and intestines from absorbing the substance. Absorbed poisons are retained in the charcoal in its passage through the digestive system.

Only administer activated charcoal under direction of Medical Control. Recommended dosage is 1 gram per kilogram of body weight.

ORAL GLUCOSE

Diabetics suffer from a lack of insulin. Insulin is required by the body to get glucose into the cells. Patients take insulin to maintain a glucose/insulin balance in the blood. Hypoglycemia (low blood sugar) occurs when the blood glucose levels are too low. Low blood sugar produces many serious symptoms and may lead to brain injury. Prompt recognition and treatment of hypoglycemia is an important EMT skill.

Indications for oral glucose treatment:

- Hypoglycemia
- Patient with an altered mental status and a known history of diabetes
- Intact gag and swallow reflexes

ASSISTANCE WITH ADMINISTRATION OF MEDS – Oral Glucose

Contraindications for oral glucose treatment:

- Unconsciousness
- Absent gag or swallow reflex

Procedure:

- Help the patient sip or chew any sugar containing substance such as honey, orange juice, candy, or granulated sugar or
- Place a bead of the commercial sugar preparation under the patient's tongue
- Monitor patient's response to the sugar

PATIENT RESTRAINT

Patient Restraint

RESTRAINTS

Restraints are a controversial topic in both prehospital and hospital medicine.

Two factors actually determine whether a device or drug is really a restraint: reason for use and consent. If the reason for use of a device is to prevent movement and it is done without the consent of the patient (or against the wishes of the patient), it is a restraint.

Generally, restraints are used in the prehospital environment whenever dangerous behavior is encountered. Dangerous behavior is regarded as behavior that is detrimental to the patient or to those attempting to render care. The provider has a clear duty to exercise increased vigilance for the safety of the patient, because the patient is unable to self protect while restrained. Likewise, the safety of EMS personnel should be ensured.

PROCESS OF RESTRAINT

Safety and the prevention of injuries are the major concerns in the process of restraint application. This process works on the assumption that no individual really wants to harm him/herself or others. It is imperative to maximize the patient's self-control before deciding to apply restraints.

- **Self-control.** The first step is to encourage the patient to exercise all the self-control he or she possesses. A statement such as "I know you don't want to hurt yourself or anyone else. I want you to reach deep down inside yourself and try to stay in control. I know you can do it" is an example of calling, with encouragement, for self-control.
- **Offer to help.** Anxiety can interfere with concentration, and an offer of assistance should reduce anxiety. A statement such as "I want to assure you that we will help you. We will not let you hurt yourself or someone else" is an example of an offer to help.
- **Be ready and able to overpower patient.** Never attempt physical restraint without the resources needed to safely overpower a patient.
- **Physical restraint.** This is the time when most injuries tend to occur, but the EMT can greatly reduce the number of injuries by eliminating the opportunity for the patient to prepare for battle. Early and swift movements reduce injuries to patients and EMS providers. Plan the actions so that each provider involved clearly understands his or her role. Typically one person is assigned to each limb, and one provider should communicate with the patient continuously. Once a decision is made to restrain, act quickly. Use only the force necessary for restraint. Depending on local requirements, it may be helpful to have the police present during restraint. EMTs should be aware of their own personal safety. The patient may become violent.

TYPES OF RESTRAINTS

The kinds of restraints used in the prehospital environment vary tremendously. It is inappropriate to use handcuffs or law-enforcement ties in an EMS or other medical environment.

The ideal restraint is a towel and roll of one-inch cloth adhesive tape to secure the wrist loop (see Figure1). The two remaining ends of the towel can then be secured to another extremity or a stretcher (see Figure 4).



After the restraints are applied to legs and arms, the patient should be placed in a **supine position** with legs secured to a backboard or stretcher. The arms also are secured at the patient's side to the backboard or stretcher. Additional restraint should be placed across the lower part of the chest, the hips, and upper thighs. In particularly difficult circumstances, paramedics may be requested to start an IV and provide chemical restraint.

Once the patient is restrained, they should be carefully monitored to avoid airway obstruction. An oxygen mask with six liters of O₂ flow may be applied to protect the EMS personnel from spit. **Do not remove restraints until directed by the hospital emergency room personnel.**

DOCUMENTATION

It is important to document the behavior that made restraints necessary as well as the restraint technique used. The documentation must reflect continual concern for the patient's safety and well-being as well as descriptions of the patient's ongoing mental status and behavior.

TRACTION SPLINTING

Traction Splinting

A lower extremity traction splint stabilizes fractures of the femur. This reduces motion, hemorrhage, swelling, and pain in the injury. Traction splints are indicated in midshaft femoral fractures without involvement of the hip joint, knee, or lower leg.

The following general application guidelines apply:

- At least two EMTs are required to apply a traction splint.
- Remove or cut away clothing, dress and bandage any significant wounds, using a sterile dressing. Manually immobilize the injured extremity while doing the preceding. Check distal pulse, movement and sensation before any manipulation.
- Measure the splint along side the uninjured extremity, extending the splint only the distance necessary for proper splint function. Remember helicopters and some other transport vehicles may have very limited space to accommodate the splint.
- Position the splint alongside the injured extremity. Open and position the ischial pad and straps on the splint; position a strap above the fracture site, one below the fracture site, one just below the knee and one just below the calf muscle. Apply the ankle hitch to the injured extremity while providing manual immobilization, avoiding any undue movement to the injured extremity.
- Prepare to apply traction by first immobilizing the upper thigh/femur in a counter-traction maneuver. Quickly reduce, then realign the fracture and simultaneously raise the thigh just high enough to get the splint under the leg during the process of applying traction. This process will cause pain. The ideal location to apply traction is just above or just below the knee (this location reduces pivoting movement at the fracture site). If the EMT is unable to maintain a secure grasp above or just below the knee for the purpose of applying traction, then the EMT may move down the leg to a point at which they can maintain a secure grasp. If extra personnel are available, support under the fracture site can be applied.
- Position the splint in place by sliding it under the extremity with the ischial pad against the patient's ischial tuberosity (where the buttock and thigh meet). Pad the groin strap then secure it. Then attach the ankle hitch to the splint. Allow the splint to completely take over traction before releasing the manual traction. Never release manual traction once it is applied, until the splint is properly applied.
- Holding the splint to keep the foot and leg still, secure the straps above the knee, below the knee, in their proper locations. Recheck distal pulse, movement and sensation. Elevate the injured leg by raising the splint stand.
- Repeat vital signs and patient assessment frequently.
- As with bandaging, splinting may need to be delayed if the patient has problems with airway, breathing, and/or circulation.

Other Splinting

Other extremities, forearms, wrists, lower legs, and ankles, may be splinted. These splints reduce dislocation, motion, hemorrhage, swelling, and pain.

GENERAL PRINCIPLES

The following general principles apply to splinting:

- Remove or cut away clothing.
- Dress and bandage significant wounds, using a sterile dressing.
- Check pulse and neurological status distal to injury before and after splinting.
- Splint bones above and below injured joints.
- Splint joints above and below injured bones.
- Do not replace protruding bones. However, it may be necessary on a mid-shaft fracture to realign angulated injuries.
- Pad splints well.
- Elevate extremity after splinting, if possible.
- Monitor distal pulse, sensation, and movement before and after splinting.

GUIDELINES FOR SPECIFIC INJURIES

- **Realignment Of Long Bone Fractures.** Attempt to realign fractures of long bones, which occur in the middle 1/3, then splint. Long bone fractures, which occur in the proximal or distal 1/3, should be realigned only if compromise of distal circulation or nerve function is detected.
- **Dislocations/Sprains.** Splint dislocations or other joint injuries in the position found, except if there is a loss of a distal pulse. In that case, attempt to straighten into anatomical position until the pulse returns, pain is felt, or resistance is encountered. Support with blanket, pillow, or well-padded splint. Elevate the limb. Pack the injured area in ice or use an ice pack.
- **Pelvic Fractures.** Immobilization of these fractures should be accomplished by use of a bed sheet. Fold sheet lengthwise into 8" – 12" width. Place beneath patient; wrap ends around patient, crossing over pelvic area. Tie sheet with square knot to apply moderate side-to-side and front to back pressure. Secure the ends to the backboard.

SPINAL IMMOBILIZATION

Spinal Immobilization

The following summary of spinal immobilization assumes that the ABCs have been assessed and treated accordingly. Certain parts of this procedure may need to be modified in a critically injured patient whose airway, breathing, or circulation problems need to be treated immediately.

This summary also assumes that the patient is sitting upright in a car. The procedure will need to be modified slightly if the patient is found in a different position or situation.

- The first EMT stabilizes the head. This EMT does not release stabilization until the patient is completely secured to a long backboard, as described below, or until another EMT takes over. (There should be no pulling or traction taken.)

The next steps may be taken by anyone on the team:

- Measure then apply a stiff, properly sized cervical collar.
- Apply extrication device, using a short backboard, KED, or long board. The technique will depend on the equipment used and the patient's condition.
- Extricate the patient from the vehicle, while maintaining spinal alignment and head and neck stabilization.
- Place patient on a long backboard.
- Immobilize the chest by crisscrossing over the shoulders, across the chest, to the hips. Assess ventilation after tightening straps to ensure that respiratory effort is not impaired.
- Immobilize the pelvis by crisscrossing or by strapping straight across. Use caution with pelvic or abdominal injuries.
- Put one strap across the thighs above the knees.
- Put one strap across the lower extremities. An additional strap, if present, may be placed across the feet.
- Stabilize the patient's head on the backboard, using ready-made equipment, rolled towels or blankets, etc. Secure patient's head to the backboard with 2" adhesive tape across forehead.
- Check pulses and neurological function after immobilization.
- Continue to monitor airway, breathing, circulation, vital signs, and level of consciousness.

Bleeding Control

Treatment decisions regarding control of bleeding depend on the initial survey (evaluation of the ABCs), other injuries, and severity of the bleeding.

Techniques to stop external bleeding:

- Apply direct pressure to the open wound by placing sterile gauze or clean material against the bleeding area.
- Apply additional pressure if bleeding continues. A pressure dressing, BP cuff, or air splint can also be used to apply direct pressure. If blood soaks through the dressings, add new dressings but do not remove the old dressings.
- If not contraindicated by the injury, elevate the bleeding extremity above the level of the heart.
- If bleeding is uncontrolled by direct pressure and elevation, apply pressure at the appropriate pressure point. Pressure should be held only as long as necessary to control bleeding, and should be reapplied if bleeding recurs. If pressure is held for a long period of time, damage can result .
- A tourniquet may be used only for control of severe, uncontrolled bleeding when all other methods of bleeding control have failed. When possible, an oversized blood pressure cuff should be used, and it should be inflated no higher than is necessary to stop bleeding.
- Once stopped, immobilization and cold packs may be indicated.

DRESSING AND BANDAGING

Dressing And Bandaging

If the patient's condition and time permits, dressing and bandaging should be performed as follows:

- Maintain Body Substance Isolation (BSI) by wearing all appropriate personal protective equipment.
- Apply direct pressure to the site of the bleeding.
- Use sterile material if possible; otherwise choose material that is as clean as possible
- Cover the entire wound with the dressing.
- Do not remove the dressing once applied. If bleeding continues, put new dressings over the blood-soaked ones.
- Secure the dressing with a bandage, which is snug but does not impair circulation.
- If possible, leave patient's fingers or toes exposed.
- Check circulation by feeling for a distal pulse or observing capillary refill.
- Elevate the injured extremity, if possible.
- Immobilize injured extremities to help control bleeding. Do not replace protruding muscles, tendons, or other internal organs. As with eviscerated abdominal contents, cover with a sheet of saran wrap followed by a bulky dry dressing. Do not moisten the dressing.
- Secure impaled objects in place with bulky dressings.
- Control bleeding with direct pressure on the area or upon pressure points. Use tourniquet for severe, uncontrolled bleeding.
- Once bleeding is stopped, immobilization and cold packs may be indicated.
- Wrap amputated parts in sterile dressings. Place the amputated part in a watertight container and then in a second container. Place the container on ice. Do not submerge the amputation in water or place directly on ice. Rapid transport of the patient and the severed part is critical to the success of re-implantation. If transport of the patient is delayed, consider sending the amputation ahead to be surgically prepared. Do not use dry ice to cool a severed part. Ice or chemical cold packs are acceptable. Large, easily removed debris, such as glass, splinters, or gravel can be removed before bandaging. Large, deeply imbedded fragments or projectiles should be secured in place by the bandage.
- Removal of a wet chemical, such as acid, should be accomplished by repeated flushing. Removal of a dry substance is accomplished by first brushing the area and then by flushing.
- In burned areas, easily removed debris should be taken off the burn; then the area can be covered by dry, sterile dressings.

Patient Positioning

In each patient care plan specific positioning should be considered.

These positions can reduce pain, improve the patient's physiology, and improve the patient's sense of well-being.

Specific positions include:

- Recovery
- Fowler's
- Prone
- Supine
- Trendelenburg's

RECOVERY POSITION (Figures A, B, C)

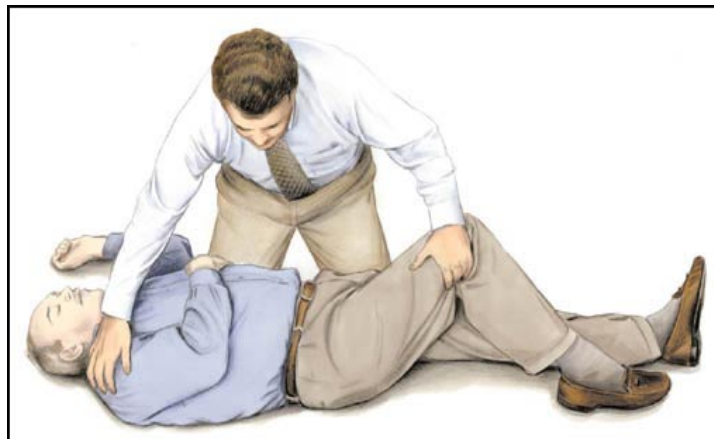
This position is used for patients who are unresponsive but breathing. It protects the airway from vomit and secretions.

If there is no evidence of trauma, place the victim on his or her side in the recovery position (Figure C).

The following steps are recommended:

1. Kneel beside the victim and straighten the victim's legs.
2. Place the victim's arm that is nearest you in a "waving good-bye" position, that is, at right angles to victim's body, elbow bent, palm up.
3. Place the victim's other arm across his or her chest, as pictured below. If the victim is small, bring this arm farther across so that the back of the hand can be held against the victim's nearest cheek.
4. Grasp the victim's far-side thigh above the knee; pull the thigh up towards the victim's body (Figure A).

Figure A



PATIENT POSITIONING – Recovery Position

5. Place your other hand on the victim's far-side shoulder, and roll the victim toward you onto his or her side (Figure B). Begin moving the victim's uppermost hand toward the victim's nearest cheek (the hand must not get trapped under the body).

Figure B



6. Adjust the upper leg you are holding until both the hip and knee are bent at right angles.
7. Tilt the victim's head back of the uppermost hand under the victim's cheek. Use this hand to maintain head tilt. Use chin lift if necessary.

Figure C



8. Check breathing regularly ("look, listen, and feel").
9. Memory aid: Victim is waving good-bye while taking a nap.

In suspected spinal cord trauma/injury first immobilize the patient with the appropriate size c-collar and backboard. If the patient is unconscious, position the patient and backboard in the lateral recumbent position (immobilized recovery position) to allow for gravitational drainage. If the patient is conscious and able to maintain their airway, position the patient supine.

SUPINE POSITION (Figure D)

This is the usual position of comfort. Padding or pillows may be used beneath the head or bodily prominences for position and comfort.

Figure D



PATIENT POSITIONING – Fowler's Position

FOWLER'S POSITION (Figure E)

In the Fowler's position the patient is usually sitting at a forty-five degree angle. A gentle knee bend adds comfort and helps to maintain the upright position. Additional pillows behind the head and knees may improve comfort.

- This position is particularly useful in patients who are in heart failure.
- Others with respiratory symptoms will also benefit from this position.

Figure E



TRENDELENBURG'S POSITION (SHOCK POSITION) (Figure F)

In this position the head is below the trunk by eight to twelve inches and the patient is supine. The use of this position will increase venous return to the heart resulting in increased blood pressure.

Figure F



PRONE POSITION (Figure G)

In the prone position the patient is placed faced down on the carrying surface. It may be useful if there is extensive or burns to the posterior of the patient.

Figure G



ADMINISTRATION OF EPINEPHRINE

Administration of Epinephrine

In King County, consistent with House Bill 1317 passed by the 57th Legislature 2001, all EMTs will have preloaded epinephrine auto injectors (EpiPen auto injector).

The EMT may administer epinephrine to:

1. Patients greater than 18 with prescription
2. Patients less than 18 with patient, parental, or guardian providing written or oral consent/ or request
3. Patient greater than 18 and no previous prescription or less than 18 and no patient, parent or guardian consent or request. Must call for permission from on-line Medical Control.

DOSAGES

Adult (30 kg or 66 lbs and heavier)

EpiPen = **0.3 mg**

Child (Under 30 kg or 66 lbs)

EpiPen = **0.15 mg**

INJECTION PROCEDURE

- Expiration date checked at the beginning of the shift change.
- Assure not cloudy or crystallized.
- Check EpiPen dose and match to patient's size.
- Remove clothing and wipe the patient's thigh with alcohol swab.
- Remove safety cap and locate the injection site on the lateral thigh.
- Place the black tip of the auto-injector against the lateral part of the patient's thigh.
- Push hard against the thigh until the injector activates.
- Hold in place for 10 seconds.
- Remove the injector and massage injection site for 10 seconds.
- Dispose of injector in a proper biohazard (sharps) container.
- Reassure patient.

POST INJECTION PROCEDURE

- Note the time given as well as the type of device used.
- Document the response on the MIR.
- Continue to monitor vitals, at least every 5 minutes.
- Continue to provide oxygen. Ventilate the patient if necessary.
- Update the incoming paramedic unit of the patient's condition.

Special Note: Always request paramedics because, in rare cases, a single dose of epinephrine may not be enough. The patient may continue to have hypotension, along with a decreasing level of consciousness, and/or increasing breathing difficulty. If the patient's condition does not improve, consult on-line medical control about injection of a second dose.

ADMINISTRATION OF EPINEPHRINE/Post Injection Procedure

Be alert to epinephrine's effects, which, in addition to improved blood pressure and respirations, may include an increased heart rate, palpitations, and anxiety. Such symptoms usually resolve within 20 minutes. Patients over age 35 may experience cardiac symptoms. Patients taking certain medications (cardiovascular medications called beta-blockers, for example) may be relatively resistant to the effects of epinephrine.

ALS/BLS INTERACTION

ALS/BLS Interaction

Interaction with paramedics is an every-day event for EMTs. EMTs can assist patients and themselves by making this a positive activity.

SHORT REPORT

It is important to give the medics a short report as soon as possible. This allows them to prepare a course of action. Delivering a concise short report helps the team move quickly in the right direction. The basics are: patient's age, chief complaint ("sick/not sick"), associated medical history, and vital signs. Provide the paramedics with any relevant information, even specific driving directions on those "hard to find" locations.

Example: "Medic 10, we have a 69 year old male complaining of substernal chest pain radiating to the left arm, with associated nausea and shortness of breath. Pain doesn't change with palpation or inspiration. Vitals are BP 160/90, pulse 88, weak and irregular, Respirations 28, shallow, labored and irregular. Skin pale and diaphoretic. We have the patient on 15 liters of O₂ via nonrebreather, and are awaiting your arrival." Any significant change in the patient can be passed along to the paramedics in an update, radioing the change and any findings related to that.

ASSISTING PARAMEDICS

It is important that the tasks of the paramedics and the EMTs are integrated and flow smoothly, from beginning to end.

ENDOTRACHEAL TUBE VENTILATION

During intubation, the patient will not receive O₂. The paramedic will give instructions to bag the patient while administering a drug to cause paralysis. Muscle twitching usually will be noted. The patient will stop breathing. Increase ventilation to the patient at about 20 breaths per minute with 100% O₂ via BVM. Be prepared to suction the patient, apply cricothyroid pressure, or tape the ETT tube to the patient. The bag valve mask should be immediately available for ventilation.

After the patient has been intubated, resume bagging. **If the tube is not secured be very careful not to displace the tube while bagging.** Avoid pushing down or moving the tube until it is secured in place. Once the tube has been secured, continue to bag. Monitor ease of ventilation. Note and check any changes. If the patient becomes difficult to ventilate it may be due to a variety of reasons. Don't force ventilation, bag gently. **If bagging is difficult or changes in any way, alert the paramedics.**

CRICOTHYROID CARTILAGE PRESSURE

When applying cricothyroid pressure gently push down on the neck at the Adams apple. The paramedic may ask that the pressure move up or down, whichever brings the vocal cords into view. BURP (Backwards, Upwards, and Rightward Pressure) is frequently useful.

SECURE AND PROTECT ENDOTRACHEAL TUBE

To hold the tube while it is taped to the patient, be sure to hold the tube near the base where it enters the mouth. Don't allow the tube to move up or down, this could result in the tube getting pulled out; or if it is pushed down, it could end up in the right main stem bronchi.

ASSISTING WITH JET INSUFFLATION

To jet the patient once the oxygen catheter has been placed in the trachea, make sure the catheter stays in place and then place a thumb over the jetport for one second and then taking it off for one second. Do this until instructed to do otherwise.

ASSISTING WITH RETROGRADE INTUBATION

- One EMT will jet insufflate the patient.
- Monitor the pulse ox and note if the patient's maintaining oxygen saturation.
- Inform paramedics if the O2 saturations are falling.
- Hand the guide wire to the paramedic.
- Hand the ET tube to the paramedic when requested.
- Stand by with the BVM for tube attachment.
- Bag the patient

ASSISTING WITH CRICOTHYROTOMY

The EMT may be asked to:

- Get the cricothyrotomy kit from its location in a kit or in the rig.
- Open kit and hand scalpel and retractors to the medics.
- Soak up blood with 4x4s as needed.
- Get a 5.0 ET tube from location.
- Hand the ET tube to the medic.
- Help hold tube in place.
- Place BVM on ET tube and bag patient while maintaining position of tube.
- Help control any bleeding post procedure.

ASSISTING WITH CO₂ DETECTORS

CO₂ detection is used as one method to assure that an endotracheal tube is positioned in the trachea and not the esophagus. This method is used in addition to auscultation and ET aspiration.

The CO₂ detector is placed between the ETT tube and the BVM. As the air is expelled from the lungs of the patient, the indicator, initially yellow, turns purple if it is registering CO₂ levels consistent with expired air. Should the CO₂ detector stop turning purple, inform the paramedic of the observations.

To apply a CO₂ detector remove the facemask from the BVM while the paramedic is intubating. Remove the white plastic caps from the both ends of the detector. Connect the side port to the bag-valve-mask. After the tube is in, place the other port into the ETT tube. The medic will then auscultate lung sounds. During this time, note and advise paramedics if the CO₂ detector turns purple.

Note: Evergreen Medic One uses on-line Capnometry to measure expired CO₂.

ALS/BLS INTERACTION – Assisting With IV Set-Up

ASSISTING WITH IV SET-UP

Setting up IVs is one of the most important and helpful things EMTs do.

- Remove the IV solution from its plastic container.
- Remove the adset from its box.
- Close the port by rolling the lever toward the bottom (narrow end) of the blue closing device, or away from the IV solution bag.
- Remove the blue plastic protective seal from the IV bag.
- Hold the bag so that the port doesn't come in contact with anything.
- Remove the plastic cap (the one above the chamber) from the IV tubing.
- Place the tubing port into the IV solution port, squeeze the drip chamber and fill to half full.
- Drain the IV solution by opening the lever wide open.
- If the drip chamber is too full, turn the IV solution bag upside down and squeeze some of the fluid back into the bag until the chamber is half full.
- Check to make sure that no air bubbles are left in the tubing.
- Close off the tubing. If there are air bubbles, let the fluid drain out.

ASSISTING IN ECG MONITORING

- Attach the monitor leads to chest.
- Turn the Defibrillator/Monitor on.
- Record ECG rhythms and inform the paramedics of any significant changes in strip recordings or on monitor screen.

ASSISTING WITH 12-LEAD EKG SET-UP

For 12 lead ECGs, ten electrodes are applied; four to the extremities, six to the anterior chest. Positioning on the correct extremity and chest position is essential. When the leads are in the proper position and the screen display is free of artifact, then a recording can be made.

ASSIST WITH DOPPLER BLOOD PRESSURE MEASUREMENT

Use the Doppler when:

- The patient is hypotensive, pulses are undetectable with stethoscope and B/P cuff or
- In a noisy environment or there is excessive movement or
- Listening for fetal heart sounds

ALS/BLS INTERACTION – Doppler Blood Pressure Measurement

Procedure:

- Place the BP cuff on the patient's arm.
- Place gel (approximately the size of a quarter) on the end of the Doppler device or directly on the anterior side of the elbow joint or the mother's abdomen (for fetal heart sounds).
- Make sure there is enough gel applied so it acts as a conduction medium and a pulse can be heard.
- Use more gel if needed.
- Put the stethoscope on.
- Turn on Doppler (per S.O.P.).
- Immerse the transducer head in the gel with light pressure and slightly adjust the placement until a whoosh sound is heard (That sound is the blood flowing through the artery) The Doppler now acts as the indicator for the blood pressure measurement.
- Once the pulse is located, pump up the BP cuff to a pressure estimated systolic blood pressure or to the pressure where the pulse disappears.
- Slowly let the air out of the cuff.
- Systolic pressure is read when Doppler signal returns.
- A systolic pressure of 50 mmHg, would be recorded as 50/Doppler (50/D).
- Allow air out of the cuff, repeat as necessary.
- Wipe the gel off of the patient's arm.

ASSISTING WITH PULSE OXIMETER

Pulse oximetry is a tool used by paramedics to evaluate a level of blood oxygenation. The Oximeter uses a photoelectric device to measure the color of oxygen-saturated hemoglobin and reports in digital format the estimated hemoglobin oxygen saturation level

Procedure:

1. The sensing probe is clipped onto a finger or earlobe.
2. The light source must have an unobstructed access to a capillary bed of the fingernail or earlobe.
3. The probe must be in a reasonably stable position and free of motion.
4. After attachment and a period of stabilization the oxygen saturation is presented as a percentage on a display screen. Normal saturation exceeds 95% in room air, and 98% with oxygen supplementation.

Situations where it may be difficult or impossible to get a reading are:

- Hypovolemia
- Hypothermia
- Pediatric Patients
- Fingernail polish
- CO poisoning

MULTI-CASUALTY INCIDENT

Multi-Casualty Incident

An MCI by definition is any incident where the demands for patient care exceed the resources available. Successful incident command response uses two concepts. 1) Incident management system, which includes the incident commander (IC) and assignments of specific duties and authorities. 2) Triage for medical treatment of patients determined by the severity of the injury.

INCIDENT COMMANDER

The first officer on the scene becomes the Incident Commander (IC). This person remains in charge until a higher-ranking officer arrives and assumes command. The IC is responsible for the overall incident.

Major Responsibilities of the Incident Commander:

- Assume Command.
- Size-up the incident.
- Identify the overall strategy.
- Give clear, specific directions to responding units about where to park and their assignments.
- Develop an effective organizational structure.

The IC is responsible for overall safety and welfare of all personnel as well as requesting and managing resources. An accountability system should be in place as well as other measures to assure safety.

MEDICAL GROUP SUPERVISOR

The Medical Group Supervisor (MGS) manages all teams within the Medical Group including triage, treatment, transportation, and morgue.

Major Responsibilities of the MGS:

- Obtain briefing from IC.
- Assign triage, treatment, and transportation team leaders.
- Establish effective communications with team leaders.
- Update IC on progress and needs.
- The MGS may initiate specific tasks:
 - * Notify Hospital Control of the MCI if no transportation officer.
 - * Consider initiating the call-up of off-shift personnel and the activation of Special Assignment Units through the IMS.
 - * Request additional supplies and equipment through the IC.
 - * Maintain records and forward them to IC.

MEDICAL POSITIONS WITHIN THE MCI PLAN

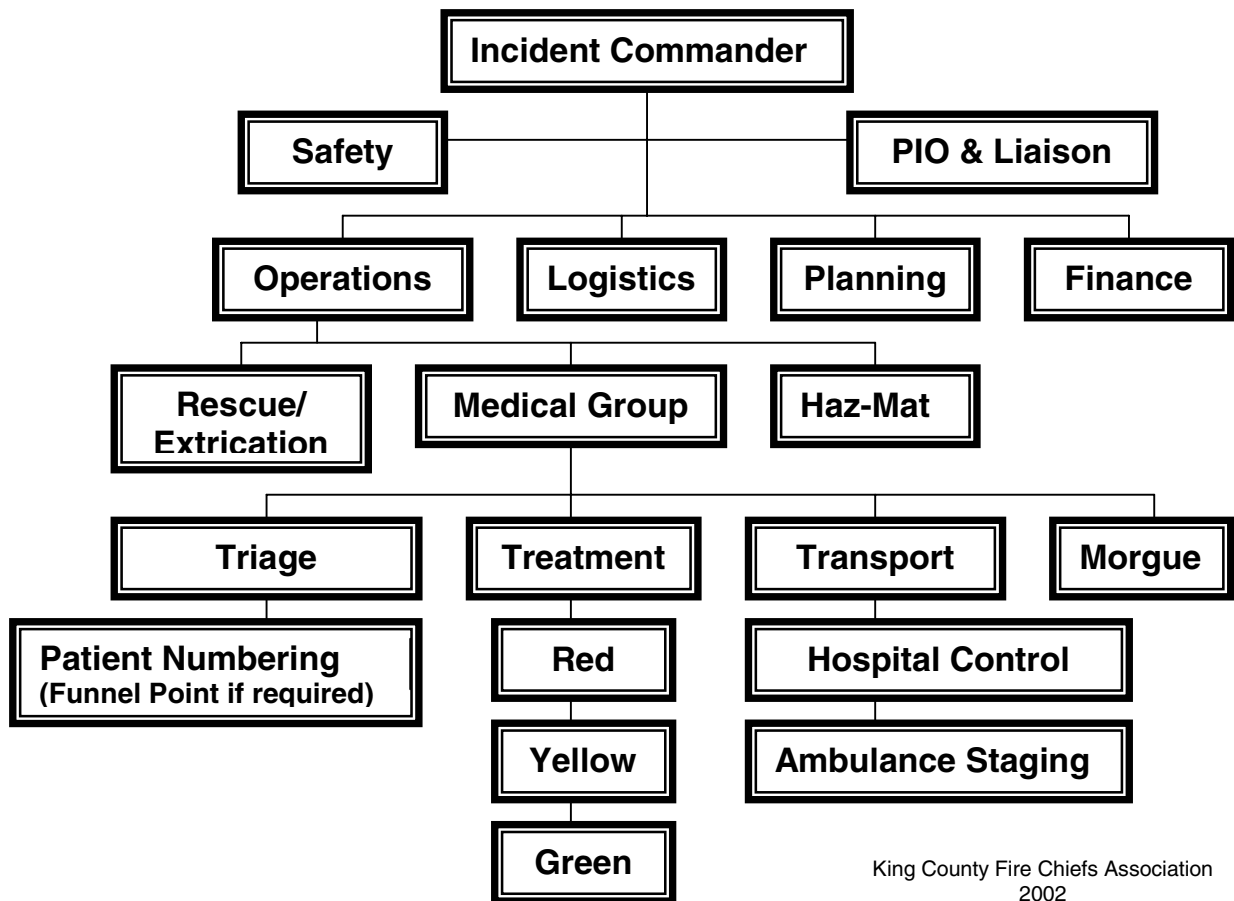
IMS defines the chain of command led by an Incident Commander (IC), who is in charge of the overall operation. The chain of command is "who reports to whom."

In the medical area, team leaders report to the Medical Group Supervisor (MGS), who reports to the IC. (Note: the Operations Section Chief is an optional position.)

The Medical team leaders include:

- Triage Group Leader
- Treatment Group Leader
- Transportation Group Leader
- Morgue Team Leader

MCI Organization Chart



King County Fire Chiefs Association
2002

MULTI-CASUALTY INCIDENT – Triage Team Leader

TRIAGE TEAM LEADER

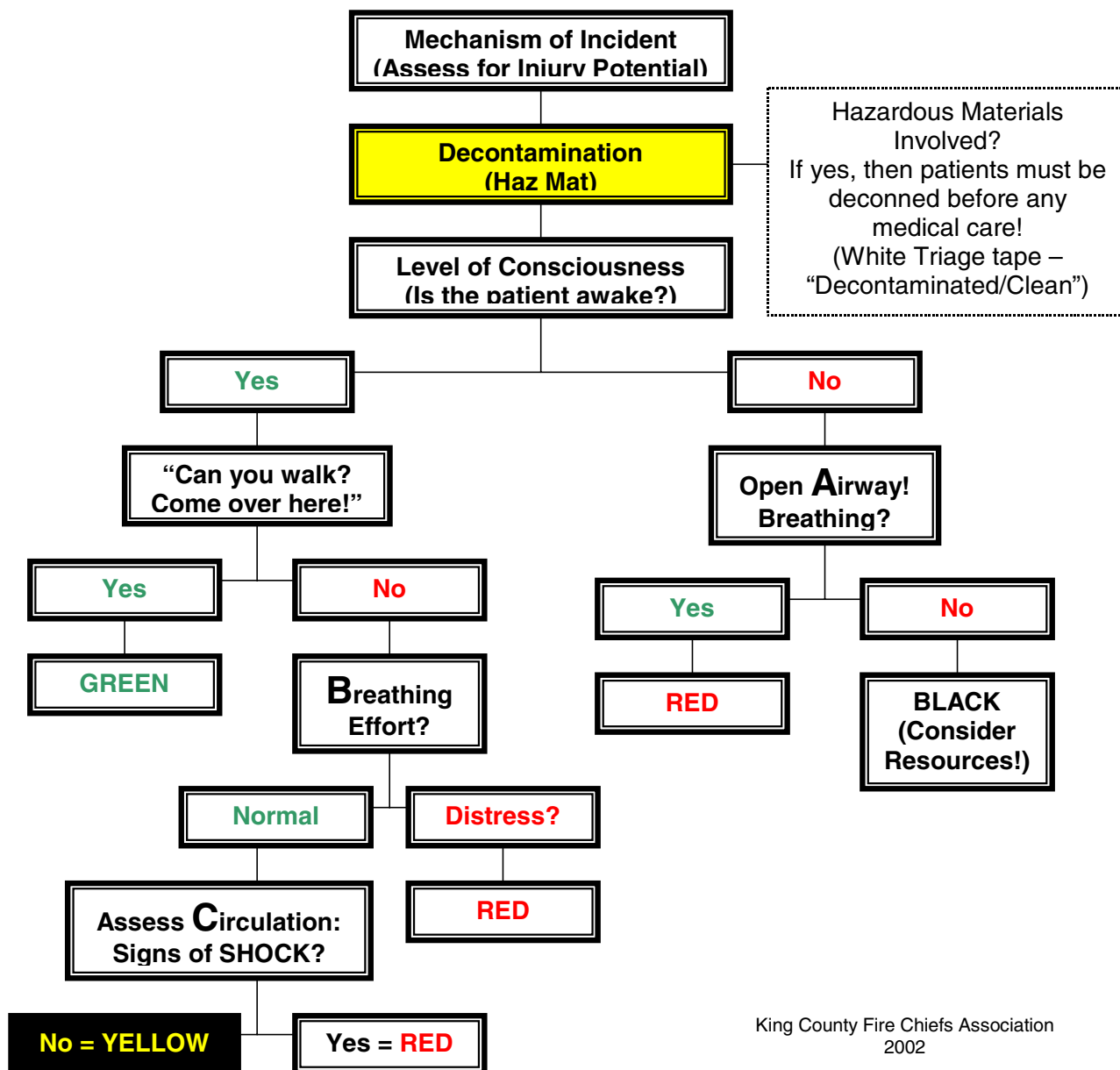
The Triage Team Leader reports to the Medical Group Supervisor once the Medical Group has been established. The driver of the first-arriving unit or other available crewmembers should initiate the work of Triage.

Major Responsibilities of the Triage Team Leader:

- Oversee triage.
- Consider resources needed
- Coordinate movement of patients to treatment area.
- Number Patients.
- Assign tags to patients.

MULTI-CASUALTY INCIDENT – Field Triage Algorithm

Field Triage Algorithm



MULTI-CASUALTY INCIDENT – Triage Team

The Triage Team accomplishes all Triage activities, including:

- Obtaining the initial patient count for the I.C.
- Performing the initial Triage of all patients and applying tape.
- Confirming patient count and Triage colors.
- Numbering the patients.
- Directing the work of litter-bearers.

TREATMENT TEAM LEADER

Major Responsibilities of the Treatment Team Leader:

- Set up treatment areas: red, yellow, green, (black). Assign headers to each.
- Assure that all patients are taped, numbered, and tagged.
- Direct and supervise treatment area.
- Assure that proper treatment and decon is given.
- Prioritize patients for transportation.

TRANSPORTATION TEAM LEADER

Major Responsibilities of the Transportation Team Leader:

- Set up ambulance staging area.
- Designate a Transport Staging Manager.
- Maintain medical communications.
- Document patient destination and number.

Communication with Hospital Control should be brief but should include:

- Patient number
- Patient Triage status (Red, Yellow, Green)
- Primary injury
- Treatment provided
- Any special information (pediatric, pregnant, etc.)
- Confirm hospital destination

**Communication is essential between Transportation Team Leader and HC
Primary Hospital Control is Harborview Medical Center: 206-731-3074 Call
and ask for the “Charge Nurse”. In the event that HMC is unavailable, the
secondary HC is Overlake: 425-455-6941**

MOVING PATIENTS

In order for patients to be moved, they must have:

- Number
- Triage color
- Hospital destination
- Transport vehicle

HELICOPTER PROCEDURES

The following are guidelines for the use of medical helicopters. In King County, this is primarily Airlift Northwest, which can be requested through local dispatch.

1. The use of medical helicopters may be considered when estimated ground transport times exceed 20 minutes or when there are multiple severely injured patients. Air medical helicopters may be considered as additional transport resources and need to be utilized according to the level of care that they can provide (Airlift Northwest can provide advanced life support capabilities versus Guardian One/MAST, which may only be utilized as rapid transport/rescue).
2. Use of medical helicopters may be considered for traumatic injuries and acute critically ill medical patients (pediatric seizures, acute abdominal aneurysms, unconscious unresponsive patients, catastrophic intracranial head bleeds, etc.).
3. Selection of trauma patients for air medical transport may be determined by the following guidelines:

Any One Of These
<ul style="list-style-type: none">▪ Penetrating injuries to the head, neck, or torso▪ Burns >20% body surface area▪ Airway burns▪ Electrical burns▪ Spinal cord injury▪ Closed head injury▪ Flail chest▪ Mechanism of injury with EMT/ paramedic gut feeling▪ All multi-system trauma patients▪ Multiple casualty incidents▪ Systolic BP <90 (for pediatric <15 years use BP or capillary refill >2 secs)▪ HR >120▪ Resp. rate <8 or >30▪ Altered mental status

4. A medic unit should be dispatched in conjunction with air medical helicopter responses to ensure patient care and transport if landing zone is not approachable.
5. An air medical crew may have the ability to cancel the medic unit if the air medical helicopter is able to land, treat, and begin transport before the arrival of the ALS ground units.
6. Airlift Northwest at this time should be considered an adjunct advanced life support provider.
7. Incident command shall be established by the first arriving unit. *The incident commander is responsible to make the initial call activating the air medical response.* If the incident commander is in doubt about the need for air medical response, he or she may consult with responding medic units. The decision to utilize air medical transport should *not* be delayed until medics arrive at the scene.

HELICOPTER PROCEDURES CONTINUED

With activation, the incident commander will also designate a landing zone with determination as to whether it will be a pre-defined site or field set-up location. A field site is indicated when the pre-defined site is either too distant from the incident location to be expeditious or is more appropriate given the emergency incident factors. Any time a landing zone is established, consideration for having a firefighting/rescue crew shall be made by the incident commander according to that jurisdiction's protocols for such.

8. Normally there should only be one (1) patient per helicopter. If two patients need to be flown, two helicopters will need to be used whenever possible.
9. Helicopters should be used with extreme caution in haz-mat situations because they can expand the product outside the containment area and also should not be used if the helicopter could be at risk of contamination. Patients must be decontaminated before air medical transport.
10. Placing Airlift Northwest on standby does not guarantee the aircraft will respond on a call. Airlift Northwest will always respond to direct requests for service even if they are on standby for another incident. Agencies should be encouraged to launch Airlift Northwest as soon as possible instead of placing them on standby status. Standby means the pilot and crew respond to aircraft with take off time reduced to 2 minutes from a go signal as opposed to 5 to 7 minutes.

SCENE SAFETY & COORDINATION

When Requesting Airlift Northwest

- Notify local dispatch of need for helicopter
- Patient considerations
 - * Notify if hazardous materials involved
 - * Patient weight - 300 pounds maximum
- Notify local dispatch of planned destination hospital
- Select LZ location at or near incident site
 - * 15' X 15' landing gear touchdown area
 - * 60' X 60' day
 - * 100' X 100' night
 - * Clear of obstructions / overhead wires
 - * Less than 10 degrees slope
 - * Roadway, school, parking lot, or field
 - * If very rural, consider GPS locator
- Select ground contact
 - * If not known at time of call - "LZ Command" will be used
- Coordinate frequency for LZ command
 - * 800 MHz-State Ops 1 preferred (if available) or
 - * VHF-TAC frequency preferred - primary frequency may be too bus

Before Helicopter Arrives

- LZ inspection
 - * Clear of debris and unsecured materials.
 - * Brush no taller than knee high.
- Prepare an LZ brief description

HELICOPTER PROCEDURES CONTINUED

- * Note overhead wires, light standards, radio towers, fences, obstructions, or other hazards in relation to compass bearings (N,S,E,W).
- * Note surface winds and visibility.
- LZ safety and security
 - * Fire department personnel maintain a 200' perimeter for bystanders, from aircraft arrival to departure.
 - * Personal protective equipment (vision and hearing protection) should be utilized.
- LZ lighting issues
 - * No white strobe lights.
 - * Red lights assist in noting location
 - * Flares okay if not a fire hazard due to the helicopter downwash.
 - * All white lights (headlights) OFF during landing and takeoff, to protect pilot's night vision
 - * Do not spotlight overhead hazards

Helicopter Arrival and Landing

- Brief the pilot prior to arrival, noting locations of known hazards in the LZ area.
- Remain in two-way radio contact throughout landing. Be prepared to call off landing if LZ or helicopter approach becomes unsafe.

While in the LZ

- Do not approach the helicopter until the rotor blades have stopped.
- Approach the helicopter only from the front, once directed by the flight crew.
- Do not walk around the tail, even when aircraft is shut down.
- Maintain the LZ security and light restrictions at all times.
- Review known hazards with the pilot before aircraft departure.

Helicopter Departure

- Clear all ground personnel away from the helicopter before engine start.
- No one may approach after engine(s) started.
- Re-establish two-way radio contact with pilot and confirm the LZ is secure.
- Notify the pilot immediately if an unsafe situation develops.

LZ Brief Example

- **"Airlift, this is (LZ command).**

The landing zone is a *(roadway, school, parking lot, field)*, **surrounded by** *(street trees, buildings, fences)*, **approximately** *(dimensions)*, **marked by** *(strobes, lights, flares, cones)*.

Obstacles and hazards in the area are *(wires, light standards, radio towers, fences)* **to the** *(note in each compass direction)*.

Surface winds are *(calm, light, variable, strong, gusting)* **in** *(compass direction)*.

Clearest path of approach is from the *(direction)*."

In summary, if you think that a patient is critical and the ground transport time will exceed 20 minutes, contact the local dispatch center. If the local dispatch center is not available, call Airlift Northwest at 1-800-426-2430.

REPORTING CHILD ABUSE & NEGLECT

RCW REFERENCE FOR REQUIRED REPORTING OF CHILD ABUSE & NEGLECT

The state EMS office has received an informal opinion from the Attorney General that EMS personnel should be considered among those required to report by RCW26. The entire RCW is available at: http://www.leg.wa.gov/wsladm/rcw.cfm#RCW_by_Title in chapter 26-Domestic Relations. The following paragraphs are taken from there.

RCW 26.44.030

Reports -- Duty and authority to make -- Duty of receiving agency -- Duty to notify -- Case planning and consultation -- Penalty for unauthorized exchange of information -- Filing dependency petitions -- Interviews of children -- Records -- Risk assessment process-- Reports to legislature.

(1)(a) When any practitioner, county coroner or medical examiner, law enforcement officer, professional school personnel, registered or licensed nurse, social service counselor, psychologist, pharmacist, licensed or certified child care providers or their employees, employee of the department, juvenile probation officer, placement and liaison specialist, responsible living skills program staff, HOPE center staff, or state family and children's ombudsman or any volunteer in the ombudsman's office has reasonable cause to believe that a child has suffered abuse or neglect, he or she shall report such incident, or cause a report to be made, to the proper law enforcement agency or to the department as provided in RCW [26.44.040](#).

(5) Any law enforcement agency receiving a report of an incident of alleged abuse or neglect pursuant to this chapter, involving a child who has died or has had physical injury or injuries inflicted upon him or her other than by accidental means, or who has been subjected to alleged sexual abuse, shall report such incident in writing as provided in RCW [26.44.040](#) to the proper county prosecutor or city attorney for appropriate action whenever the law enforcement agency's investigation reveals that a crime may have been committed. The law enforcement agency shall also notify the department of all reports received and the law enforcement agency's disposition of them. In emergency cases, where the child's welfare is endangered, the law enforcement agency shall notify the department within twenty-four hours. In all other cases, the law enforcement agency shall notify the department within seventy-two hours after a report is received by the law enforcement agency.

REPORTING REQUIREMENTS FOR ABUSE OF VULNERABLE ADULTS

RCW 74.34

These requirements have been abstracted from RCW 74.34, under Public Assistance chapter. The entire RCW can be found at:

http://www.leg.wa.gov/wsladm/rcw.cfm#RCW_by_Title

(2) "Abuse" means the willful action or inaction that inflicts injury, unreasonable confinement, intimidation, or punishment on a vulnerable adult. In instances of abuse of a vulnerable adult who is unable to express or demonstrate physical harm, pain, or mental anguish, the abuse is presumed to cause physical harm, pain, or mental anguish. Abuse includes sexual abuse, mental abuse, physical abuse, and exploitation of a vulnerable adult, which have the following meanings:

(a) "Sexual abuse" means any form of nonconsensual sexual contact, including but not limited to unwanted or inappropriate touching, rape, sodomy, sexual coercion, sexually explicit photographing, and sexual harassment. Sexual abuse includes any sexual contact between a staff person, who is not also a resident or client, of a facility or a staff person of a program authorized under chapter [71A.12](#) RCW, and a vulnerable adult living in that facility or receiving service from a program authorized under chapter [71A.12](#) RCW, whether or not it is consensual.

(b) "Physical abuse" means the willful action of inflicting bodily injury or physical mistreatment. Physical abuse includes, but is not limited to, striking with or without an object, slapping, pinching, choking, kicking, shoving, prodding, or the use of chemical restraints or physical restraints unless the restraints are consistent with licensing requirements, and includes restraints that are otherwise being used inappropriately.

(c) "Mental abuse" means any willful action or inaction of mental or verbal abuse. Mental abuse includes, but is not limited to, coercion, harassment, inappropriately isolating a vulnerable adult from family, friends, or regular activity, and verbal assault that includes ridiculing, intimidating, yelling, or swearing.

(d) "Exploitation" means an act of forcing, compelling, or exerting undue influence over a vulnerable adult causing the vulnerable adult to act in a way that is inconsistent with relevant past behavior, or causing the vulnerable adult to perform services for the benefit of another.

(8) "Mandated reporter" is an employee of the department; law enforcement officer; social worker; professional school personnel; individual provider; an employee of a facility; an operator of a facility; an employee of a social service, welfare, mental health, adult day health, adult day care, home health, home care, or hospice agency; county coroner or medical examiner; Christian Science practitioner; or **health care provider** subject to chapter [18.130](#) RCW.

REPORTING REQUIREMENTS FOR ABUSE OF VULNERABLE ADULTS/RCW 74.34.035

RCW 74.34.035

Reports -- Mandated and permissive -- Contents -- Confidentiality.

(1) When there is reasonable cause to believe that abandonment, abuse, financial exploitation, or neglect of a vulnerable adult has occurred, mandated reporters shall immediately report to the department. If there is reason to suspect that sexual or physical assault has occurred, mandated reporters shall immediately report to the appropriate *law enforcement agency and to the department*.



Maintaining Confidentiality of Medical Incident Report Forms

I. Purpose: To provide a guideline for EMS staff regarding the management of Medical Incident Report Forms (MIRFs) as confidential medical records.

II. Legal Requirement: The Revised Code of Washington (RCW), Chapter 70.02 states that “health care information is personal, and sensitive information that if improperly used or released may do significant harm to a patient’s interests in privacy, health care, or other interests...It is the public policy of (Washington State) that a patient’s interest in the proper use and disclosure of the patient’s health care information survives even when the information is held by persons other than health care providers.”

The Uniform Health Care Information Act establishes a broad definition of health care information. RCW 70.02.010 provides: “...any information, whether oral or recorded in any form or medium, that identifies or can readily be associated with the identity of a patient and directly relates to the patient’s health care. The term includes any record of disclosures of health care information.” This means that any record of patient information (including electronic mail) that can link the patient to the record is confidential, thus obscuring the patient’s demographic information (i.e. name, address, phone, age, etc.) does not change the record’s confidential nature.

Public Health - Seattle & King County outlines the Department policy regarding patient health care information in “*Health Care Disclosure - Confidentiality, Storage, Access to, Correction to and Information Release*.” The Medical Incident Report Forms (MIRFs) utilized by the Division of Emergency Medical Services contain health care information, and thus, it is the responsibility of anyone with access to MIRF records to protect the patient by maintaining the confidentiality of these records. If this confidentiality is breached, not only can the EMS Division be held liable but an individual can also be held liable in civil court. All employees should have access to the Department policy, as well as have any questions answered that may arise regarding confidentiality.

The following is a summary of the EMS Division policy.

III. Guidelines: MIRF information is confidential and should be viewed only by those in EMS who have established a legitimate “need to know,” such as those caring for the patient, or collecting and inputting patient information into a database. The record should not be read by or shared with other office staff, ancillary (including maintenance and cleaning) staff or the public.

MAINTAINING CONFIDENTIALITY/MAINTENANCE & STORAGE OF MIRFS

A. Maintenance and Storage of MIRFs:

- Only MIRFs currently in use should be displayed on desks or counter tops.
- MIRFs should be stored in a locked file cabinet or an established secure storage area. These areas should be locked when not in use.
- MIRF copies should never be left in or around the copying machine or break room.
- Copies of MIRFs should be treated the same as the original. Copies should be kept to a minimum. The more copies available, the greater the risk of accidental disclosure.
- When there is no further need for MIRF copies, they should be shredded prior to disposal (originals must be forwarded for data entry).
- The postal service or hand delivery is the preferable route for transporting MIRF records from one office to another. If FAX is used, be sure that the recipient is there to receive the information prior to sending the FAX. In either case, a copy of this guideline should accompany the record as the rules of confidentiality extend to anyone reading or receiving a patient's medical record.
- MIRF information should never be discussed or revealed outside the confines of the purpose for which the information is being collected. In other words, do not discuss information with anyone other than those who "need to know" for medical or data collection purposes.

B. Access to MIRF Information: Requests for health care information is common. Reporting of aggregate data does not breach rules of confidentiality when individuals cannot be identified. However, release of identifiable patient health care information may be released only under specific circumstances.

- Release to the Patient: Requires written consent from the patient.
- Release to the Patient's Representative: Requires written consent from the patient, including the specific name of the person or agency to whom the information should be released.
- Release by Law: The law grants other parties access through subpoenas and court orders, unless the patient has authorized disclosure of their health care information to the attorney or the court via written consent.

C. Medical Record Confidentiality Agreement: All EMS Division employees are expected to sign the Medical Record Confidentiality Agreement and abide by the guidelines for maintaining confidentiality of patient health care information. Copies will be distributed to the employee's personnel file, supervisor file and the employee.

****Note:** All requests for patient health care information should be reviewed by the EMS Division Senior Administrative Assistant prior to release. Refer any additional questions to your immediate supervisor or the Department Risk Management representative.

EMERGENCY DEPARTMENT PHONE NUMBERS**EMERGENCY DEPARTMENT PHONE NUMBERS**

Allenmore Hospital	Tacoma	253-572-2323
Auburn Regional Medical Center	Auburn	253-833-7711
Children's Hospital	Seattle	206-526-2222 ext. 1234
Enumclaw Community Hospital	Enumclaw	360-825-2505
Evergreen Hospital	Kirkland	425-899-1000
Good Samaritan Hospital	Puyallup	253-848-6661
Group Health - Central	Seattle	206-326-3000
Group Health - Eastside	Redmond	425-883-5151 ext. 5120
Harborview Medical Center	Seattle	206-731-3000 ext. 74
Highline Community Hospital	Burien	206-244-9970
Highline Comm. Hospital - Riverton	Tukwila	206-244-0180
Mary Bridge Children's Hospital	Tacoma	253-403-1400
Mary Bridge Health Center	Tacoma	253-403-1419
Monroe Valley Hospital	Monroe	360-794-1402
Northwest Hospital	Seattle	206-368-2576
Overlake Hospital	Bellevue	425-454-4010
Providence Hospital	Seattle	206-320-2000
Providence Hospital – Everett	Everett	425-261-2000
Puget Sound Behavioral Health	Tacoma	253-798-4500
Snoqualmie Valley Hospital	Snoqualmie	425-831-2300
St. Clare Hospital	Lakewood	253-588-1711
St. Francis Hospital	Federal Way	253-838-9700
St. Joseph Medical Center	Tacoma	253-627-4101
Stevens Hospital	Edmonds	425-640-4000
Swedish Hospital - Ballard	Seattle	206-782-2700
Swedish Hospital - Central	Seattle	206-386-6000 ext. 2576
Tacoma General Hospital	Tacoma	253-403-1000
University of Washington Medical Center	Seattle	206-598-3300
VA Puget Sound Health Center	Seattle	206-762-1010
Valley General Hospital	Monroe	360-794-7497
Valley Medical Center	Renton	425-578-2574
Vencor Hospital	Seattle	206-364-2050
Virginia Mason Hospital	Seattle	206-583-6433 ext. 871

DISPATCH CENTER CONTACTS

DISPATCH CENTER CONTACTS

DISPATCH CENTER	AGENCIES
Airport Communication Center SeaTac International Airport P.O. Box 68727 Seattle, WA 98168-0727 Phone: (206) 433-5380 FAX: (206) 439-5167	<ul style="list-style-type: none"> Port Of Seattle FD
Dispatch Review Committee King County EMS Contact: Linda Culley Phone: (206) 296-4693 FAX: (206) 296-4866	<ul style="list-style-type: none"> King County EMS 999 3rd Avenue, Suite 700 Seattle, WA 98104
Eastside Communications Center 16100 NE Eighth Bellevue, WA 98008 Phone: (425) 885-3131 FAX: (425) 452-7873	<ul style="list-style-type: none"> Bellevue FD/PD, Bellevue Medic One Bothell FD Clyde Hill PD Evergreen Medic One Issaquah FD KCFD #10, 16, 27, 36, 38, 45, 49, 50 Kirkland FD Medina FD North Bend FD Redmond FD Shoreline FD, Shoreline Medic One Snoqualmie FD
Enumclaw Police Department 1705 Wells Enumclaw, WA 98022 Phone: (360) 825-3505 FAX: (360)825-0184	<ul style="list-style-type: none"> Enumclaw FD (KCFD #28) Rescue 1
Mercer Island Communications Center 9611 SE 36 th Mercer Island, WA 98040 Phone: (206) 236-3500 FAX: (206) 236-3659	<ul style="list-style-type: none"> Mercer Is. FD/PD (Public Safety)
Valley Communications Center 23807 - 98th Avenue South Kent, WA 98031 Phone: (253) 852-2121 FAX: (253) 859-5736 (training) FAX: (253) 850-3068 (supervisors)	<ul style="list-style-type: none"> Auburn FD KCFD #1, 2, 17, 20, 26, 40, 43, 44, 46, 47 Kent FD King County Medic One Pacific FD Renton FD Tukwila FD
Vashon Fire Department P.O. Box 1150 Vashon, WA 98070 Phone: (206) 463-9192 FAX: (206) 463-2954	<ul style="list-style-type: none"> KCFD #13 Vashon Medic One

FIRE DEPARTMENT CONTACTS**FIRE DEPARTMENT CONTACTS**

Organization	Address	Telephone
Auburn Fire Department	1101 "D" Street NE Auburn, WA 98002	(253) 931-3060 (Phone) (253) 931-3055 (Fax)
Bellevue Fire Department	766 Bellevue Way SE Bellevue, WA 98009-9012	(425) 452-6892 (Phone) (425) 452-5287 (Fax)
Black Diamond Fire Department	22015 SE 296th Street Black Diamond, WA 98010	(253) 631-2608 (Phone) (360) 886-1229 (Phone) (253) 631-1899 (Fax)
Bothell Fire & EMS	10726 Beardslee Blvd. Bothell, WA 98011-3250	(425) 486-1678 (Phone) (425) 486-4556 (Fax)
Burien/Normandy Park Fire Department	15100 Eighth Avenue SW Seattle, WA 98166-2244	(206) 242-2040 (Phone) (206) 433-6042 (Fax)
Des Moines Fire Department	2238 South 223 rd Des Moines, WA 98198-7935	(206) 878-2210 (Phone) (206) 878-2113 (Fax)
Duvall Fire Department	15600 First Avenue NE Duvall, WA 98019	(425) 788-1625 (Phone) (425) 788-0199 (Fax)
Eastside Fire & Rescue	175 NW Newport Way Issaquah, WA 98027	(425) 392-3433 (Phone) (425) 313-3200 (Phone) (425) 391-8764 (Fax)
Enumclaw Fire Department	1330 Wells Street Enumclaw, WA 98022	(360) 825-5544 (Phone) (360) 825-9442 (Fax)
Evergreen Medic One	8440 161 st Avenue NE Redmond, WA 98052	(425) 895-4877 (Phone) (425) 895-4878 (Fax)
Fall City Fire Department	4301 - 334th Place SE Fall City, WA 98024-0609	(425) 222-5841 (Phone) (425) 222-4566 (Fax)
Federal Way Fire Department	31617 First Avenue South Federal Way, WA 98003-5201	(253) 839-6234 (Phone) (253) 529-7205 (Fax)
Kangley/Palmer Fire Department	33536 SE 309 th Street Palmer, WA 98051-0206	(360) 886-1915 (Phone)
Kent Fire & Life Safety	24611 - 116th Avenue SE Kent, WA 98031	(253) 856-4300 (Phone) (253) 856-6300 (Fax)
King County Medic One	7064 S 220 th Street, Building # 9 Kent, WA 98032	(206) 296-8550 (Phone) (800) 459-7544 (206) 296-0515 (Fax)
Kirkland Fire Department	123 Fifth Avenue Kirkland, WA 98033	(425) 828-1143 (Phone) (425) 828-1292 (Fax)
Maple Valley Fire & Life Safety	22225 SE 231 st Street Maple Valley, WA 98038	(206) 296-4343 (Phone) (206) 296-0936 (Fax)
Mercer Island Fire Department	3030 - 78 th SE Mercer Island, WA 98040-2823	(206) 236-3600 (Phone) (206) 236-3622 (Fax)
Mountain View Fire & Rescue	323126 - 148 th Avenue SE Auburn, WA 98002	(253) 735-0284 (Phone) (253) 735-0287 (Fax)
North Highline Fire District	1243 SW 112 th Street Seattle, WA 98146	(206) 243-0330 (Phone) (206) 244-8418 (Fax)
Northshore Fire Department	18030 - 73 rd Avenue NE Kenmore, WA 98028	(425) 486-2784 (Phone) (425) 483-6598 (Fax)
Pacific Fire Department	133 Third Avenue SE Pacific, WA 98047	(253) 929-1120 (Phone) (253) 929-1193 (Fax)
Port of Seattle Fire Department	2400 South 170 th Street Seattle, WA 98158	(206) 433-5327 (Phone) (206) 431-4908 (Fax)

FIRE DEPARTMENT CONTACTS CONTINUED**FIRE DEPARTMENT CONTACTS CONTINUED**

Organization	Address	Telephone
Redmond Fire Department	8450 - 161st Avenue NE Redmond, WA 98052	(425) 556-2200 (Phone) (425) 556-2227 (Fax)
Renton Fire Department	1055 South Grady Way Renton, WA 98055	(425) 430-7000 (Phone) (425) 430-7044 (Fax)
SeaTac Fire Department	2929 South 200th Street SeaTac, WA 98198	(206) 824-2726 (Phone) (206) 878-1551 (Fax)
Seattle Fire Department	301 Second Avenue South Seattle, WA 98104	(206) 386-1400 (Phone) (206) 386-1412 (Fax)
Shoreline Fire Department	1016 North 175th Street Shoreline, WA 98133	(206) 533-6500 (Phone) (206) 546-5719 (Fax)
Skykomish/Stevens Pass Fire Department	107 West Cascade Skykomish, WA 98288	(360) 677-2686 (Phone) (360) 677-2574 (Fax)
Skyway/Bryn Mawr/Lakeridge Fire Department	12424 - 76th Avenue South Seattle, WA 98178	(206) 772-1430 (Phone) (206) 772-6095 (Fax)
Snoqualmie Fire & Rescue	38624 SE River Street Snoqualmie, WA 98065-0455	(425) 888-1551 (Phone) (425) 888-1513 (Fax)
Snoqualmie Pass Fire Department	68902 Snoqualmie Summit Drive Snoqualmie Pass, WA 98068	(425) 434-6333 (Phone) (425) 434-6355 (Fax)
Spring Glen Fire Department	10828 SE 176 th Street Renton, WA 98055	(425) 255-0931 (Phone) (206) 296-4299 (Phone) (206) 296-7742 (Fax)
Tukwila Fire Department	444 Andover Park E. Tukwila, WA 98188	(206) 575-4404 (Phone) (206) 575-4439 (Fax)
Vashon-Maury Fire & Rescue	10020 SW Bank Road Vashon, WA 98070-1150	(206) 463-2405 (Phone) (206) 463-6494 (Fax)4
Woodinville Fire & Life Safety	19900 144th Avenue NE Woodinville, WA 98072	(425) 483-2131 (Phone) (425) 486-0361 (Fax)

ALS PROVIDER CONTACTS

Organization	Address	Telephone
Bellevue Fire Department	766 Bellevue Way SE Bellevue, WA 98009-9012	(425) 452-6892 (Phone) (425) 452-5287 (Fax)
Evergreen Medic One	8440 - 161st Avenue NE Redmond, WA 98052	(425) 895-4877 (Phone) (425) 895-4878 (Fax)
King County Medic One	7064 South 220 th #9 Seattle, WA 98032	(206)296-8550 (Phone) (206)296-0515 (Fax)
Seattle Fire Department	301 Second Avenue South Seattle, WA 98104	(206) 386-1400 (Phone) (206) 386-1412 (Fax)
Shoreline Fire Department	1016 North 175th Street Shoreline, WA 98133	(206) 533-6500 (Phone) (206) 546-5719 (Fax)
Vashon-Maury Fire & Rescue	10020 SW Bank Road Vashon, WA 98070-1150	(206) 463-2405 (Phone) (206) 463-6494 (Fax)4

AFFILIATED EMS AGENCY CONTACTS

AFFILIATED EMS AGENCY CONTACTS

Organization	Address	Telephone
Tri-Med Ambulance Contact: Jayne Manlowe	13365 48 th Avenue S. Seattle, WA 98168	(425) 709-7048 (Phone) (206) 243-0756 (Fax)
Stat Ambulance Contact: Lee Pedersen	2448 76 th Avenue SE Mercer Island, WA 98040	(206) 623-1111 (Phone) (206) 236-6122 (Fax)
Lifemed, Inc. Contact: Scott Gruzebeck	P.O. Box 12603 Mill Creek, WA 98082-0603	
American Medical Response Contact: Bill Engler	13075 Gateway Drive SE, Suite 100 Tukwila, WA 98168	(206) 444-4440 (Main #) (206) 444-4480 (Phone) (206) 444-4599 (Fax)
The Boeing Company Contact: Randy Krause	P.O. Box 3707, MS 3U-67 Seattle, WA 98124	(253) 657-9853 (Phone) (253) 657-9988 (Fax)
KC Police Search & Rescue Contact: Ron Ryals	7300 Perimeter Road S., Room 143 Seattle, WA 98108-3849	(206) 296-3853 (Phone) (206) 296-4271 (Fax)
Weyerhaeuser Co. Contact: Judy Harmon	WTC TR-2 Federal Way, WA 98053-9777	(253) 924-4412 (Phone) (253) 942-0641 (Fax)
Rural/Metro Ambulance	6405 – 218 th Street SW Mt. Lake Terrace, WA 98043	(425) 672-3555 (Phone) (425) 771-3891 (Fax)

WA STATE OFFICE OF EMERGENCY MEDICAL AND TRAUMA PREVENTION

P.O. Box 47853 Olympia, WA 98504-7853	2725 Harrison Avenue NW, Unit 500 Olympia, WA 98502
Main Office	(360) 705-6700
Julie Kitten	(360) 705-6710
Toll Free in Washington	(800) 458-5281
Fax	(360) 705-6706 (360) 705-6708

COMMUNITY RESOURCES

COMMUNITY RESOURCES

Agency	Phone Number	Reason to Call
Alcohol and Drug Treatment Hotline	206-722-3700	Resource for individuals seeking help for alcohol or drug problem
Animal Control	206-296-7387	Animal problems
Centers for Disease Control National AIDS Hotline STD/HIV Hotline Lifelong AIDS Alliance	1-800-342-AIDS 206-205-7837 206-329-6923	HIV/AIDS information and referral
Chemtrek	1-800-424-9300	Chemical and hazmat information
Child Protective Services	1-866-363-4276 1-800-562-5624	(After Hours)
Communicable Disease Control	206-296-4774 206-297-4782 (24hr)	Immunization information, exposure to infectious diseases
Community Info Line	206-461-3200	General information and referrals related to social services
Crisis Clinic of King County	206-461-3222	Mental health resource agency for concerned parents, relatives, etc.
HMC Mental Health Clinic	206-731-3411	Mentally ill patients not serious enough to hospitalize, but in need of professional counseling
King County CISM	206-852-2121	Critical Incident Stress Mngmt., 24-hour line to request a debriefing
King County EMS Division	206-296-4693	Administration of EMS services
Language Bank	206-323-2345	Foreign language translation
Medical Examiner	206-731-3232	
Poison Control Center	1-800-732-6985	Ingestion of substances
Rape Relief Crisis Line Sexual Assault Center (HMC)	206-632-7273 206-223-3047	Support for rape victims
Seattle Mental Health	1-800-827-7571	24-hour suicide crisis hotline
SIDS Foundation of Washington	206-548-9290 1-800-533-0376	Support for families who have experienced a SIDS death
Washington State Domestic Violence Hotline	1-800-562-6025	Domestic violence information

COMMON PRESCRIPTION AND OTC DRUGS

Condition	Brand or Trade Name	Generic
Asthma and COPD	Prednisone Proventil Ventolin Theo-Dur Azmecort Atrovent Brethine	Albuterol Albuterol Theophylline Triamcinolone Ipratropium Terbutaline
Anxiety and Depression	Xanax Prozac Elavil Tofranil	Alprazolam Fluoxetine Amitriptyline Imipramine
Control Diabetes	NPH Iletin /Humulin Micronase/Diabeta Glucotrol Glucophage	Insulin Glyburide Glipizide Metformin
Control Seizures	Dilantin Tegretol Phenobarbital Depakote	Phenytoin Carbamazepine Phenobarbital Valproic acid
Digestive Problems and Ulcers	Zantac Tagamet Propulsid	Ranitidine Cimetidine Cisapride
Control Pain	Motrin/Advil Percocet Lortab	Ibuprofen Oxycodone Hydrocodone
Angina	Nitro-stat Isordil	Nitroglycerin Isosorbide
Control rapid heart rate	Lanoxin Calan Cardizem	Digoxin Verapamil Diltiazem
Control High Blood Pressure	Procardia Capoten Cardizem Tenormin Hydrodiuril/Esidrix	Nifedipine Captopril Diltiazem Atenolol Hydrochlorothiazide
Control Congestive Heart Failure (Diuretics)	Lasix Bumex Hydrodiuril/Esidrix	Furosemide Bumetanide Hydrochlorothiazide (HCTZ)

COMMON PRESCRIPTION & OTC DRUGS CONTINUED

Cardiac	Brand Name	Generic Name	Condition			
			Angina	CHF	Dysrhythmias	High BP
	Nitrostat	nitroglycerin	✓			
	Lanoxin	digoxin		✓	✓	
	Procardia	nifedipine	✓			✓
	Vasotec	enalapril		✓		✓
	Cardizem	diltiazem	✓			✓
	Calan	verapamil			✓	✓
	Inderal	propranolol	✓		✓	✓
	Dyazide	hydrochlorothiazide		✓		✓
	Lopressor	metoprolol tartrate	✓			✓
	Lasix	furosemide		✓		✓
	Micro K	potassium chloride		✓		✓
	Quinidex	quinidine			✓	
	Coumadin	warfarin	anticoagulant			

NORMAL VITAL SIGNS BY AGE

Age	Respirations (breaths/minute)	Pulse (beats/minute)	Systolic Blood Pressure (mm Hg)
Newborn: 0 to 1 month	40 to 60	120 to 160	50 to 70
Infant: 1 month to 1 year	30 to 60	100 to 160	70 to 95
Toddler: 1 to 3 years	24 to 40	90 to 150	80 to 100
Preschool-Age: 3 to 6 years	22 to 34	80 to 140	80 to 100
School-Age: 6 to 12 years	18 to 30	70 to 120	80 to 110
Adolescent: 12 to 18 years	12 to 16	60 to 100	90 to 110
Over 18 years	12 to 20	60 to 100	90 to 140

CONVERSIONS

It is sometimes useful to convert metric to English, Fahrenheit to Centigrade, or vice versa. For example, it may be useful in trying to determine how much of a poison or medicine a child has ingested accidentally. These conversions are approximate.

TEMPERATURE

Degrees F	Degrees C	Degrees F	Degrees C
106	41.1	98	36.7
105	40.6	97	36.1
104	40	96	35.6
103	39.4	94	34.4
102	38.9	92	33.3
101	38.3	90	32.2
100	37.8	85	29.4
99	37.2	80	26.7
98.6	37	75	23.8
		70	21.1

Normal body temperature, when taken orally, is 98.6 degrees F (37 degrees C). Rectal temperature is normally 1 degree F higher. Axillary temperature is normally 1 degree F lower.

LIQUID MEASUREMENTS

1 tsp	5 cc	1/6 oz.
1 Tbsp	15 cc	1/2 oz.
2 Tbsp	30 cc	1 oz.
1 cup	240 cc	8 oz.
1 pint	500 cc	16 oz.
1 quart	1000 cc	32 oz.

LINEAR MEASUREMENTS

1 meter (m)	100 centimeters (cm)
1 m	1000 millimeters (mm)
1 cm	.4 inch
2.5 cm	1 inch
1 m	39 inches

WEIGHT EQUIVALENTS

30 grams (g)	1 oz.
1000 g	1 kg
1000 mg	1 g
1 kg	2.2 lbs.
.45 kg	1 lb.

USEFUL EMS WEB SITES

USEFUL EMS WEB SITES

Organization	Email Address
American Diabetes Association	diabetes.org
American Heart Association	amhrt.org
American Red Cross	redcross.org
BLS Training and Education	metrokc.gov/health/ems/training.htm
Centers for Disease Control and Prevention	cdc.gov/
Combined Health Information Database	http://chid.nih.gov/
Educational Source Material and Books for EMT Training	emtb.com/
Emergency Medical Services Journal	emsmagazine.com/
Federal Emergency Management	fema.gov/about/
Internet Search Engine for Medical Information	achoo.com
Jones and Bartlett Publishers	http://www.jbpub.com/
King County Emergency Medical Services	metrokc.gov/health/ems/
Medicine Net . Com	medicinenet.com
Medtronic Physio Control Website	AEDhelp.com
National Capital Poison Center	poison.org/
National Institute of Neurological Disorders and Stroke	ninds.nih.gov
National Stroke Association	stroke.org
New England Journal of Medicine	nejm.org/content/index.asp
NHTSA EMS Website	nhtsa.dot.gov/people/injury/ems/
Online Emergency Services Resource	Jems.com
Online Medical Dictionary	graylab.ac.uk/omd/index.html
Optimizing Mask Ventilation	enw.org/MaskVentilation.htm
Stanford University Stroke Center	stanford.edu/group/neurology/stroke/main.html
Sudden Death Trauma Scenarios	swsahs.nsw.gov.au/livtrauma/education/sudden.asp
Trauma Moulage Scenarios	trauma.org/resus/moulage/moulage.html
Trauma Website for United Kingdom	trauma.org
Visual and Web Based Learning for Medicine	adam.com
Washington State EMS Internet Web Site	doh.wa.gov/hsqa/emtp/

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NOTES

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